

# MONTHLY **LABOR REVIEW**

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

\*\*\*\*\* + LAWRENCE R. KLEIN, Editor + \*\*\*\*\*

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## *This Issue in Brief*

### *Trends in urban wage rates, April 1946*

Basic rates in urban wages registered greater gains between October 1945 and April 1946 than in any other 6-month period since the beginning of World War II, and at the end of August 1946 they were still advancing substantially each month. In spite of appreciable advances in basic rates, real wages in August 1946 showed only moderate increases over prewar (January 1941) levels, because of a 42.6-percent upswing in consumers' prices between these two dates. If measured from the wartime peak levels of January 1945, real weekly earnings show a decline, and real wage rates only a small increase. Page 657.

### *The labor force in the first year of peace*

Reconversion of the Nation's labor force was virtually completed by the end of the first year of peace. During the year period following VJ-day, more than 10 million servicemen were demobilized and absorbed into civilian pursuits. In addition, approximately 4.5 million "extra" wartime workers, principally women and teen-age youth, left the labor market to resume their peacetime activities. Many more millions of workers shifted from war to civilian production. Yet, at no time during this period was unemployment a critical problem, and the year ended with employment at record levels. An article on page 669 discusses the characteristics of the labor force and gives comparable data for earlier periods.

### *Labor requirements in production and distribution of concrete masonry units and concrete pipe*

Approximately 69.0 man-hours are required to manufacture and deliver 1,000 concrete blocks to the construction site, according to a Bureau of Labor Statistics survey of 50 concrete block producers. The same operations require 64.8 man-hours for lightweight blocks and 74.0 man-hours for heavyweight blocks. An analysis of 34 concrete pipe plants shows that a total of 7.5 man-hours was required to produce and transport 1 ton of concrete pipe to the site of construction. It was estimated that 2.6 man-hours were required to extract, process, and deliver to the plant the necessary materials (including electric power) for the production of 1 ton of pipe. More detailed data appear in the article on page 681.

### *Labor participation in industrial management in European countries*

European labor is seeking broader participation in the management of industry—a movement that is not new but is favored by a combination of economic and political factors. The enormous reconstruction task requires the coordinated efforts of all productive forces. Labor, moreover, has gained in status and influence in many countries, owing to its contribution to the war effort and to the underground resistance. In 11 countries, labor is now authorized to participate in some way in the management of individual enterprises; works councils also deal with working conditions and related questions. Measures to provide for labor participation in management are under discussion in at least 3 other European countries. Page 692.

### *Readjustment of veterans to civilian life*

A study of the readjustment experience of a group of World War II veterans was made by the Bureau of Labor Statistics in March and April 1946. Of the veterans interviewed, 76 percent were working and 6 percent were going to school. Nearly a third of those who took jobs or entered schools did so within 2 weeks after separation. Data relating to other employment and unemployment experiences, migration, and earnings appear in an article on page 712.

### *Postwar adjustment of aircraft workers in southern California*

Approximately 20 percent of the 287 aircraft workers in southern California studied by the Bureau of Labor Statistics were jobless in early 1946. By June 1946, unemployment had declined to about 12 percent—a figure considerably higher than for the total civilian labor force; about 26 percent of the workers were still in the aircraft industry; and about 34 percent had obtained employment in other industries. Page 706.

### *Operations of consumers' cooperatives in 1945*

In spite of difficult operating conditions, the consumers' cooperatives showed continued progress in 1945, reaching new high points in membership, business, and value of goods produced. Local associations had a combined business amounting to \$669,856,000, of which distributive associations accounted for \$657,500,000, and service associations for \$12,356,000. The distributive and service business of central organizations amounted to \$186,600,000. Goods produced in cooperative factories were valued at \$60,578,000. Nearly 3,600 local associations in the United States at the end of 1945, were members of regional wholesale associations. Page 750.

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## CURRENT LABOR STATISTICS

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Current Statistics of Labor Interest in Selected Periods <sup>1</sup>

[Available in reprint form]

Item	Unit or base period	1946			1945	1939: Average for year
		Sep- tember	August	July	Sep- tember	
<i>Employment and unemployment</i>						
Civilian labor force (BC): Total.....	Thousands.....	59,440	60,000	60,400	52,900	<sup>2</sup> 54,230
Male.....	do.....	42,170	42,830	43,000	34,250	<sup>2</sup> 40,950
Female.....	do.....	17,270	17,170	17,400	18,650	<sup>2</sup> 13,280
Employed <sup>3</sup> .....	do.....	57,370	57,960	58,130	51,250	<sup>2</sup> 46,930
Male.....	do.....	40,590	41,250	41,240	33,320	<sup>2</sup> 35,600
Female.....	do.....	16,780	16,710	16,890	17,930	<sup>2</sup> 11,330
Nonagricultural.....	do.....	48,630	48,830	48,190	42,450	<sup>2</sup> 37,430
Agricultural.....	do.....	8,740	9,130	9,940	8,800	<sup>2</sup> 9,500
Unemployed.....	do.....	2,070	2,040	2,270	1,650	<sup>2</sup> 7,300
Male.....	do.....	1,580	1,580	1,760	930	<sup>2</sup> 5,350
Female.....	do.....	490	460	510	720	<sup>2</sup> 1,950
Civilian employment in nonagricultural establishments: Total <sup>4</sup> .....	do.....	40,146	39,865	39,260	36,398	30,353
Manufacturing.....	do.....	14,752	14,578	14,245	13,159	10,078
Mining.....	do.....	824	828	815	784	845
Construction <sup>4</sup> .....	do.....	2,004	2,091	1,976	945	1,753
Transportation and public utilities.....	do.....	3,949	3,998	3,963	3,831	2,912
Trade.....	do.....	7,924	7,816	7,740	7,143	6,618
Finance, service, and miscellaneous.....	do.....	5,155	5,160	5,152	4,603	4,160
Federal, State, and local government, excluding Federal force-account construction.....	do.....	5,448	5,394	5,369	5,933	3,988
Military personnel.....	do.....	2,501	2,812	3,105	12,082	367
Production-worker employment:						
Manufacturing.....	do.....	12,019	11,881	11,554	10,529	8,192
Bituminous-coal mining.....	do.....	335	336	332	325	371
Class I steam railroads, including salaried employees (ICC).....	do.....	1,362	1,368	1,350	1,414	988
Hired farm workers (BAE).....	do.....	2,777	2,786	2,711	2,813	<sup>5</sup> 3,240
<i>Hours and earnings</i>						
Average weekly hours:						
Manufacturing.....	Hours.....	40.3	40.4	39.6	41.4	37.7
Bituminous-coal mining.....	do.....		42.4	36.0	<sup>6</sup> 40.1	27.1
Retail trade.....	do.....		41.5	41.2	<sup>6</sup> 41.2	43.0
Building construction (private).....	do.....	38.7	38.2	38.2	38.2	32.6
Average weekly earnings:						
Manufacturing.....		\$45.41	\$44.90	\$43.34	\$40.88	\$23.86
Bituminous-coal mining.....			\$62.37	\$52.27	<sup>6</sup> \$49.90	\$23.88
Retail trade.....			\$33.17	\$32.94	<sup>6</sup> \$29.01	\$21.17
Building construction (private).....		\$58.49	\$56.67	\$56.25	\$53.11	\$30.39
Average hourly earnings:						
Manufacturing.....		\$1.126	\$1.111	\$1.093	\$0.987	\$0.633
Bituminous-coal mining.....			\$1.467	\$1.457	<sup>6</sup> \$1.249	\$0.886
Retail trade.....			\$0.891	\$0.889	<sup>6</sup> \$0.772	\$0.536
Building construction (private).....		\$1.510	\$1.482	\$1.473	\$1.392	\$0.933
Average straight-time hourly earnings in manufacturing, using—						
Current employment by industry.....			\$1.075	\$1.064	<sup>7</sup> \$0.969	\$0.622
Employment by industry as of January 1941.....			\$1.078	\$1.067	<sup>7</sup> \$0.933	\$0.640
Quarterly farm wage rate, per day without board (BAE).....		<sup>8</sup> \$4.94		\$4.84	<sup>8</sup> \$4.39	<sup>8</sup> \$1.57
<i>Industrial injuries and labor turn-over</i>						
Industrial injuries in manufacturing per million man-hours worked.....				<sup>9</sup> 17.7	<sup>9</sup> 17.0	15.4
Labor turn-over per 100 employees in manufacturing:						
Total separations.....		6.7	6.6	5.9	12.0	<sup>5</sup> 2.8
Quits.....		5.2	5.3	4.5	6.7	<sup>5</sup> 1.1
Lay-offs.....		0.9	0.7	0.8	4.5	<sup>5</sup> 1.6
Total accessions.....		7.0	7.0	7.8	7.4	<sup>6</sup> 6.2
<i>Labor-management disputes</i>						
Work stoppages beginning in month:						
Number.....		450	500	480	573	218
Number of workers involved.....	Thousands.....	380	235	185	526	98
All work stoppages during month:						
Number of man-days idle.....	do.....	5,000	3,425	3,300	4,341	1,484
Man-days idle as percent of available working time.....		0.79	0.49	0.48	0.73	0.28

See footnotes at end of table.



Current Statistics of Labor Interest in Selected Periods<sup>1</sup>—Continued

Item	Unit or base period	1946			1945	1939: Average for year
		Sep- tember	August	July	Sep- tember	
<i>Prices</i>						
Consumers' price index (moderate income families in large cities):						
All items	1935-39=100	145.9	144.1	141.0	128.9	99.4
Food	1935-39=100	174.1	171.2	165.7	139.4	95.2
Clothing	1935-39=100	165.9	161.2	157.9	148.2	100.5
Rent	1935-39=100	108.8	108.7		108.3	104.3
Fuel, electricity, and ice	1935-39=100	114.4	113.7	113.3	110.7	99.0
Housefurnishings	1935-39=100	165.6	160.0	156.9	146.8	101.3
Miscellaneous	1935-39=100	129.9	129.8	127.8	124.6	100.7
Retail food price index (large cities):						
All foods	1935-39=100		171.2	165.7	139.4	95.2
Cereals and bakery products	1935-39=100	137.3	135.4	126.1	109.1	94.5
Meats	1935-39=100	188.5	186.6	173.7	131.6	96.6
Dairy products	1935-39=100	188.6	180.1	179.1	133.4	95.9
Eggs	1935-39=100	193.3	173.6	161.0	183.9	91.0
Fruits and vegetables	1935-39=100	176.4	178.3	188.4	172.5	94.5
Beverages	1935-39=100	162.0	126.6	126.0	124.7	95.5
Fats and oils	1935-39=100	151.4	180.3	137.9	124.1	87.7
Sugar and sweets	1935-39=100	141.5	140.3	138.5	126.5	100.6
Wholesale price index: All commodities						
All commodities other than farm products	1926=100	117.2	121.9	117.5	100.9	79.5
All commodities other than farm products and foods	1926=100	112.2	111.6	109.5	99.8	81.3
Farm products	1926=100	154.3	161.0	157.0	124.3	65.3
Foods	1926=100	131.9	149.0	140.2	104.9	70.4
<i>National income and expenditures</i>						
National income payments (BFDC)	Millions	\$14,263	\$13,481	\$13,979	\$13,424	\$6,092
Consumer expenditures for goods and services (BFDC)	do			\$30,165	\$25,480	\$15,406
Retail sales (BFDC)	do	\$8,203	\$8,556	\$7,671	\$6,398	\$3,647
<i>Production</i>						
Industrial production index, unadjusted (FR): Total						
Manufactures	1935-39=100	183	180	174	171	100
Minerals	1935-39=100	189	186	178	177	109
	1935-39=100	148	147	150	137	106
Bituminous coal (BM)	Thousands of short tons	51,080	54,830	50,800	46,938	32,905
Car loadings index, unadjusted (FR)	1935-39=100	149	145	143	137	101
Electric energy (FPC): Total						
Utilities (production for public use)	Millions of kw.-hr	22,820	23,669	22,583	20,725	(1)
Industrial establishments	do	18,814	19,515	18,620	17,012	\$10,911
	do	4,006	4,154	3,963	3,713	(1)
<i>Construction</i>						
Construction expenditures	Millions	\$1,247	\$1,243	\$1,163	\$517	\$662
Value of urban building construction started	do	\$339	\$412	\$383	\$192	(1)
New nonfarm family dwelling units		66,500	80,900	79,100	21,800	\$42,400

<sup>1</sup> Source: Bureau of Labor Statistics unless otherwise indicated. Abbreviations used: BC (Bureau of the Census); ICC (Interstate Commerce Commission); BAE (Bureau of Agricultural Economics); BFDC (Bureau of Foreign and Domestic Commerce); FR (Federal Reserve); BM (Bureau of Mines); FPC (Federal Power Commission). Most of the current figures are preliminary.

<sup>2</sup> 10-month average—March to December 1940. Not comparable with later figures. Revisions are in process.

<sup>3</sup> Excludes employees on public emergency work, these being included in unemployed civilian labor force. Civilian employment in nonagricultural establishments differs from nonagricultural employment in civilian labor force mainly because of the inclusion in the latter of such groups as self-employed and domestic and casual workers.

<sup>4</sup> Includes workers employed by construction contractors and Federal force-account workers (nonmaintenance construction workers employed directly by the Federal Government). Other force-account and nonmaintenance construction employment is included under manufacturing and other groups.

<sup>5</sup> September.

<sup>6</sup> August.

<sup>7</sup> July. August 1945 figures not available.

<sup>8</sup> October.

<sup>9</sup> June.

<sup>10</sup> Second quarter.

<sup>11</sup> Not available.

# MONTHLY LABOR REVIEW

NOVEMBER 1946

## Trends in Urban Wage Rates, April 1946<sup>1</sup>

URBAN wage rates showed greater advances between October 1945 and April 1946 than in any 6-month period since the beginning of World War II, and at the end of August 1946 they were still registering substantial gains each month. Despite large increases in basic rates, however, real wages still showed only moderate advances over January 1941 levels, as a result of a 42.6-percent rise in consumers' prices between January 1941 and August 1946. If measured from wartime peak levels, real weekly earnings show a decline despite the basic wage rate increases that have occurred during the reconversion period, whereas real wage rates show a small gain.

These facts were disclosed by an analysis of the Bureau of Labor Statistics semiannual survey of the trend of urban wage rates for April 1946. The urban wage-rate series covers all manufacturing industries and the wholesale and retail trade, finance groups, local utilities, and service trades of the nonmanufacturing industries.

### *War and Postwar Wage Movements in Manufacturing*

In April 1946, 8 months after the end of war with Japan, average hourly wage rates in urban manufacturing industry as a whole stood 11.7 percent above the VJ-day level, 12.4 percent above the VE-day

<sup>1</sup> Prepared under the direction of Frances Jones Clerc and Eleanor K. Buschman of the Bureau's Wage Analysis Branch. For a more detailed description of the Bureau's measure of urban wage trends and the findings of previous surveys, see *Monthly Labor Review*, October 1944 (p. 684), or Serial No. R. 1684; February 1945 (p. 379), or Bulletin No. 809; September 1945 (p. 519), or Bulletin No. 846; and February 1946 (p. 289), or Bulletin No. 860.

Urban wage rate trends should not be confused with trends of factory earnings, published monthly by the Bureau (see p. 828 of this issue). The urban wage-rate series measures changes in basic wage rates resulting from general changes in pay scales and from individual wage-rate adjustments within occupational classifications. For incentive workers they reflect changes in straight-time hourly earnings of key occupational groups. They exclude the effect of such factors as the shifting of employment among regions, industries, and occupations, and most of the changes in the composition of the labor force, as well as changes in payments for overtime and late-shift work, vacations and holidays, and other similar items.

The series dealing with trends of factory earnings, on the other hand, is based on gross earnings of all wage earners and reflects such factors as hours of work, premium pay for overtime and late-shift work, and shifting of employment among regions, industries, and occupations. The estimated straight-time average hourly earnings are computed by applying a correction factor to gross average earnings to eliminate the effect of overtime premiums but not of night-shift premiums or other factors affecting gross earnings.



level, and 48.9 percent above the rates that prevailed prior to the wartime wage rise, in January 1941 (table 1). Since April 1946,<sup>2</sup> wage rates have continued to advance at a rate of approximately 1 percent per month.

Urban wage rates showed moderate increases throughout the war. An advance of 17.0 percent in manufacturing industries occurred during the 21-month prestabilization period (January 1941 to October 1942). The subsequent period of wage stabilization (October 1942 to August 1945) witnessed gains in manufacturing wage rates averaging somewhat less than one-half of 1 percent per month and totaling 13.9 percent, bringing the total increase between January 1941 and the end of the war with Japan to 33.3 percent. Average weekly earnings in manufacturing rose more sharply, and reached a high point in January 1945, which was 78.3 percent above the January 1941 base period. This gain was the composite result of higher wage rates, a longer average workweek (by 16.4 percent), substantial amounts of premium pay for overtime and late-shift work, and the movement of large numbers of workers from lower-wage industries and areas to those where higher wages prevailed.

The months following January 1945, however, recorded a steady decline in weekly manufacturing earnings from the all-time high of that month, culminating in a sharp break in August 1945, coincident with the end of the war with Japan. This decline reflected the influence of the above-named factors (except wage-rate increases) operating in reverse while reconversion to a peacetime economy got under way.<sup>3</sup>

In the summer of 1945, organized labor began a concerted drive for increases in wage rates that would maintain wartime levels of earnings under a potentially shorter peacetime workweek. When wage controls were relaxed in August 1945, numerous employers immediately put into effect wage increases that were pending approval by the National War Labor Board; some gave raises that they had been prevented from granting during the period of wage stabilization; and still others allowed interim increases of small amounts which they intended to supplement after clarification of governmental wage policy and the establishment of wage-movement patterns for individual industries or areas. These types of increases accounted for most of the 1.7 percent rise in urban wage rates that occurred between August and October 1945.

<sup>2</sup> Estimate based on the Bureau's monthly series of average weekly hours and average hourly earnings. The latest data for the urban wage-rate series apply to April 1946.

<sup>3</sup> The upward movement of wages since April 1946 is caused mainly by first or additional increases negotiated to bring the rates in specific establishments into line with industry or area patterns.

<sup>4</sup> See the Bureau's monthly series of Hours and Earnings, and of Employment and Pay Rolls, published monthly in mimeographed form and summarized in each issue of the Monthly Labor Review.

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During the 6-month period following October 1945, pattern-setting wage negotiations of national importance were concluded, and increases in wage rates became general throughout the country. Some of these increases followed industry patterns, some followed area patterns, and a great many were modeled after the pattern of 18½ cents set in the 1946 steel case.<sup>4</sup> The net increase in urban wage rates between October 1945 and April 1946, chargeable in the main to these general wage changes, was 9.8 percent. More than half of this amount occurred after February 13, 1946, the closing date of the "wage increase pattern period" established by Executive Order No. 9697 of February 14, 1946. General wage increases between VJ-day and April 1946 brought the total of manufacturing wage changes resulting from this type of increase to 29.6 percent for the period since January 1, 1941.

Table 1 shows movements of wages in manufacturing, as indicated by various Bureau of Labor Statistics wage measures, for specified periods, January 1941 to April 1946.

TABLE 1.—*Comparative Summary of Changes in Earnings and Wage Rates in Manufacturing, January 1941–April 1946*

Period	Percent of change in specified period				
	Gross weekly earnings	Gross hourly earnings	Adjusted hourly earnings <sup>1</sup>	Urban wage rates	General wage changes
Total period (January 1941–April 1946).....	+61.0	+54.9	+54.7	<sup>2</sup> +48.9	+29.6
Prestabilization period (January 1941–October 1942).....	+46.0	+30.7	+21.5	<sup>2</sup> +17.0	+12.6
Stabilization period (October 1942–August 1945).....	+7.3	+14.7	<sup>2</sup> +15.6	<sup>2</sup> +13.9	+3.6
October 1942–April 1943.....	+9.2	+5.7	+3.2	<sup>2</sup> +3.0	+1.1
April 1943–October 1943.....	+5.6	+4.7	+3.6	+3.8	+5
October 1943–April 1944.....	+1.5	+2.5	+3.0	+1.9	+5
April 1944–October 1944.....	+3.1	+1.8	+2.1	+2.2	+4
October 1944–April 1945 (VE-day).....	+4	+1.3	+1.9	+1.6	+5
April 1945–August 1945 (VJ-day).....	-11.5	-1.9	<sup>2</sup> +9	+7	+4
Postwar period (August 1945–April 1946).....	+2.8	+3.3	<sup>3</sup> +10.1	<sup>4</sup> +11.7	<sup>4</sup> +11.1
August 1945–October 1945.....	-1.8	-3.8	<sup>2</sup> +1.0	<sup>4</sup> +1.7	<sup>4</sup> +1.5
October 1945–February 1946 (Executive Order No. 9697).....	-1.0	+1.7	+4.2	+4.3	+4.1
February 1946–April 1946.....	+5.7	+5.6	+4.6	+5.3	+5.1

<sup>1</sup> Hourly earnings excluding premium payments for overtime, and with industries weighted in proportion to their 1941 employment.

<sup>2</sup> Partially estimated.

<sup>3</sup> Data not available for August 1945. July 1945 data substituted.

<sup>4</sup> October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimates were obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

#### MOVEMENTS OF GROSS AND REAL MANUFACTURING WAGES

*Wartime trends.*—Projecting the urban wage-rate index beyond April 1946 in the light of other wage measures for the same period, there appears to have been a further increase of 4 to 5 percent between

<sup>4</sup> For data on postwar general wage increases, see Postwar Increases in Basic Wage Rates, Monthly Labor Review, September 1946, or mimeographed Bureau press release, Increases Granted in Basic Rates Since VJ-Day, dated September 20, 1946.

April and August 1946. Urban wage rates were, therefore, about 56 percent above prewar (January 1941) levels in August 1946. Average weekly earnings, which fell 14.6 percent between January 1945 and February 1946, began to rise again with increases in basic rates, and in August 1946 were 67.5 percent above January 1941 levels. The impact of the 42.6-percent rise in consumers' prices<sup>5</sup> over the same period reduced the increase in real weekly earnings to 17.5 percent, and in real wage rates to 9.4 percent (chart 1).<sup>6</sup>

*Trends since wartime peak.*—In comparing wage levels in August 1946 with peak wartime conditions (January 1945), wage rates increased an estimated 18.9 percent, but average weekly earnings stood 6.1 percent below the January 1945 base (chart 2). Adjusted by consumers' prices, the real earnings for these two measures of wages became a 5.1-percent advance and a 17.0-percent decline, respectively.

### *Trend of Manufacturing Wage Rates, April 1945 to April 1946*

During the period of wartime wage stabilization, increases in wage rates as revealed by the urban wage-rate index, reflected not only general wage changes,<sup>7</sup> which usually accounted for only a small proportion of the increase, but also wage "adjustments" for individual workers, promotions of workers to the tops of job-rate ranges, hiring above normal entrance rates, and similar practices growing out of tight labor-market conditions. Since straight-time hourly earnings for incentive occupations are used in constructing the indexes, changes in productivity for these workers have also been reflected in the series. At the end of the war (VJ-day) urban wage rates had actually advanced 33.3 percent over the January 1941 level, but general wage changes accounted for an increase of only 16.7 percent (table 1).

By contrast with the war period, changes in wage rates since VJ-day may be identified very closely with general changes in wage scales. General wage changes amounted to an 11.1-percent increase in wage rates between August 18, 1945, and April 1946; the urban wage-rate index rose 11.7 percent.<sup>8</sup> The respective figures for the 1-year period covered by this study were 11.5 and 12.4 percent.

<sup>5</sup> As measured by the BLS index of consumers' prices. For an explanation of this index, see article on p. 781 of this issue.

<sup>6</sup> Real wages represent the purchasing power of actual wages. Real-wage indexes are computed by dividing actual-wage indexes by consumers' price indexes.

<sup>7</sup> The Bureau's definition of "general wage change," for purposes of these studies, is a general or across-the-board change in rates that affects, at one time, 10 percent or more employees, or all workers in important occupational classifications.

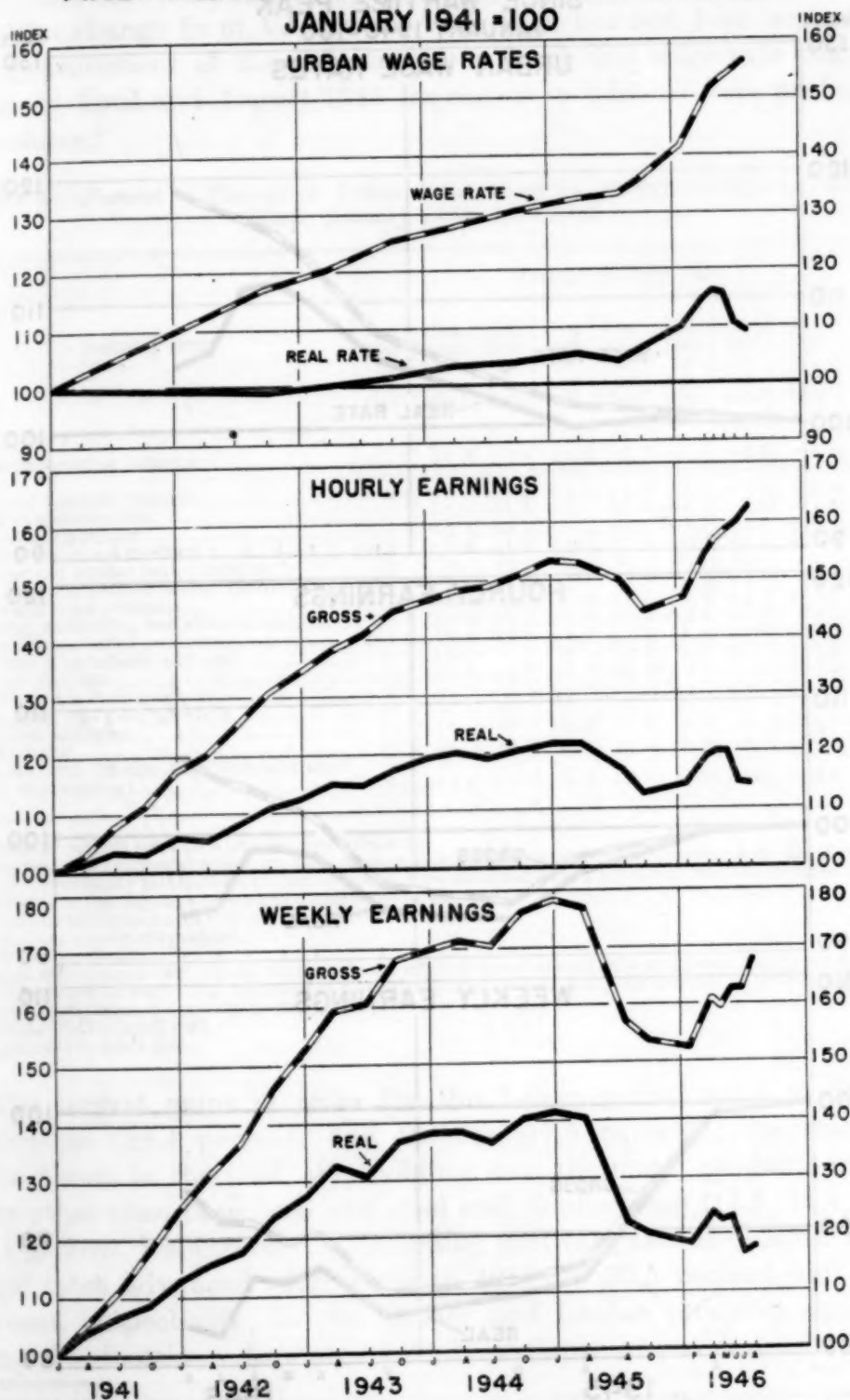
<sup>8</sup> See footnote 4.



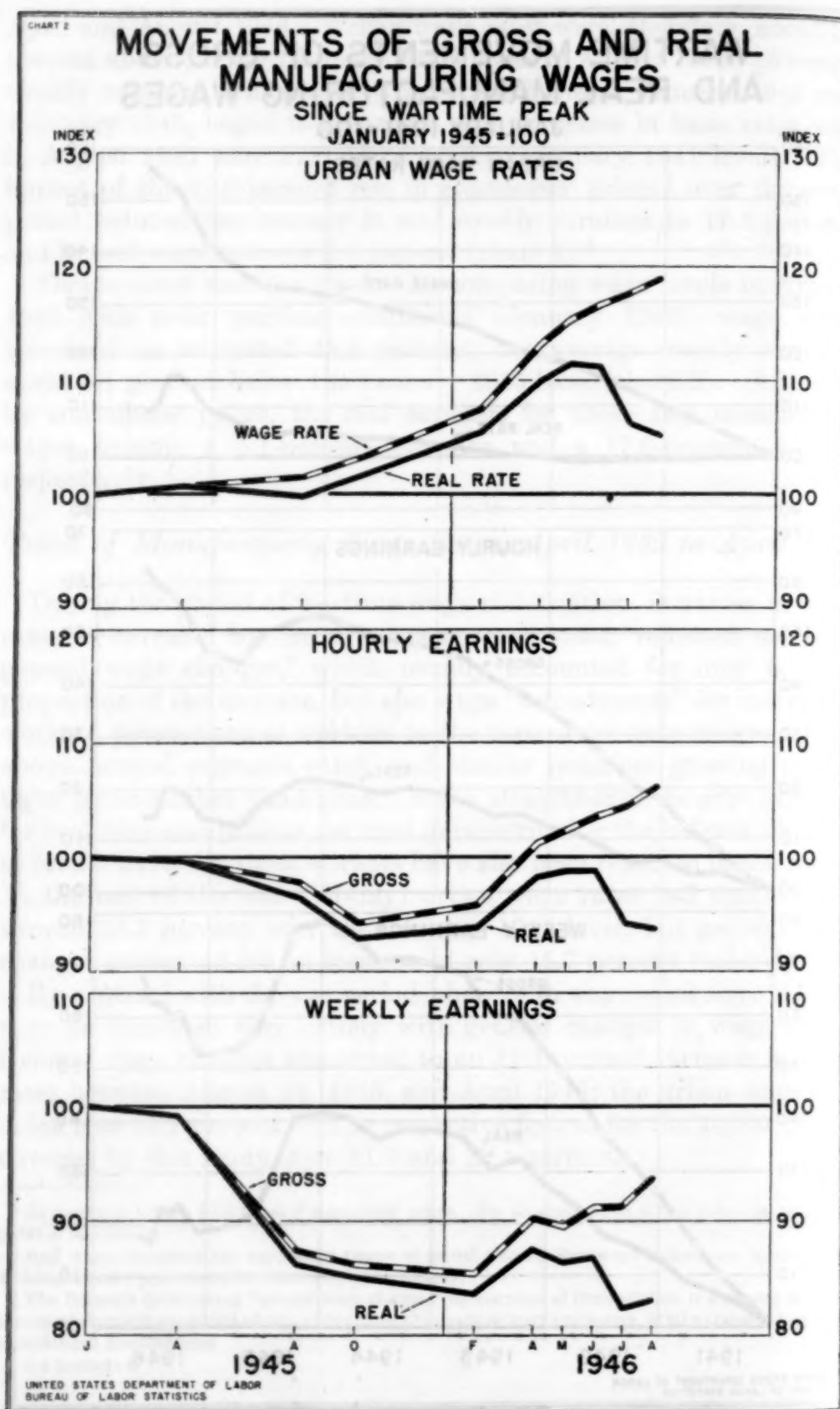
CHART I

# WARTIME MOVEMENTS OF GROSS AND REAL MANUFACTURING WAGES

JANUARY 1941 = 100



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS



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## CHANGES IN WAGE RATES IN INDUSTRY GROUPS

The trend of urban wage rates for major groups of manufacturing industries between January 1941 and April 1946 is presented in table 2. The change from VJ-day to April 1946 has not been separated for measurement at the industry-group level, but wage-rate changes between April and August 1945 (as shown in table 1) were negligible in volume.<sup>9</sup>

TABLE 2.—Percent of Change in Urban Wage Rates in Manufacturing, by Industry Group, January 1941–April 1946<sup>1</sup>

Industry group	Percent of change from—								
	Jan. 1941 to Oct. 1942 <sup>1</sup>	Oct. 1942 to Apr. 1943 <sup>1</sup>	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945 <sup>2</sup>	Oct. 1945 to Apr. 1946	Jan. 1941 to Apr. 1946 <sup>1</sup>
All manufacturing industries.....	+17.0	+3.0	+3.8	+1.9	+2.2	+1.6	+2.4	+9.8	+48.9
Food and kindred products.....	+13.6	+3.6	+3.2	+1.1	+1.9	+1.4	+3.0	+7.8	+40.9
Tobacco manufactures.....	+15.7	+2.8	+1.1	+3.1	+1.7	+3.7	+5.3	+7.4	+47.8
Textile-mill products.....	+24.2	+2.1	+2.7	+2.7	+2.3	+1.1	+5.0	+12.3	+63.1
Apparel and allied products.....	+13.8	+5.6	-.2	+5.0	+7.6	+6.7	+3.1	+11.0	+65.6
Lumber and timber basic products.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Furniture and finished lumber products.....	+16.2	-3.0	+3.4	+1.8	+2.9	+1.0	+5.7	+9.0	+41.9
Paper and allied products.....	+13.6	+2.4	+5.2	+.2	+1.7	+.4	+3.2	+11.6	+44.1
Printing, publishing, and allied industries.....	+7.4	+1.9	+3.1	+1.6	+2.5	+2.1	+3.5	+9.1	+35.5
Chemicals and allied products.....	+15.9	+2.8	+2.4	+1.3	+1.2	+.8	+5.0	+10.6	+46.4
Products of petroleum and coal.....	+18.0	+1.0	-.3	( <sup>4</sup> )	+.3	+.1	+5.7	+12.0	+41.2
Rubber products.....	+15.5	+2.8	+2.0	+2.5	+1.4	+2.0	+.5	+15.2	+48.5
Leather and leather products.....	+20.3	+3.2	+4.5	+4.0	+4.2	+4.2	+3.1	+12.9	+70.5
Stone, clay, and glass products.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Basic iron and steel.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	+.7	-.6	+.4	( <sup>3</sup> )	+13.2 <sup>7</sup>	+13.8
Shipbuilding.....	( <sup>3</sup> )	( <sup>3</sup> )	+.4	+.4	+.5	+.8	+.4	+10.0 <sup>8</sup>	+12.8
Metalworking (except basic iron and steel and shipbuilding).....	+16.2	+3.4	+5.4	+1.9	+2.0	+1.2	+2.0	+8.9	+47.9

<sup>1</sup> Data for periods prior to April 1943 are estimated.

<sup>2</sup> October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimates were obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

<sup>3</sup> Representation inadequate to show percent of change.

<sup>4</sup> Less than a tenth of 1 percent.

<sup>5</sup> Data not available.

<sup>6</sup> April 1945 to April 1946. Does not include the effect of 4-cent second shift and 6-cent third shift differentials introduced in 1945. The inclusion of shift differentials would bring the increase in urban wage rates between April 1945 and April 1946 to 15.4 percent.

<sup>7</sup> October 1943 to April 1946.

<sup>8</sup> April 1943 to April 1946.

The largest gains in rates for the 1-year period were made by petroleum (18.4 percent) and textiles (17.9 percent); the smallest gains<sup>10</sup> were in the food, shipbuilding, and the metal products industries other than basic iron and steel and shipbuilding (11.0, 10.4, and 11.1 percent, respectively). Including postwar gains as of April 1946, wage rates advanced after January 1941 by 70.5 percent and 65.6 percent, respectively, in the leather and leather products and the apparel industries. In view of the importance of piecework in these

<sup>9</sup> General wage changes for the period ranged in volume from one-half of 1 percent for products of petroleum and coal to seven-tenths of 1 percent for furniture and finished lumber products.

<sup>10</sup> Relatively small gains were also made by the lumber, and the stone, clay, and glass-products industries, for which separate data are not published.

industries, these figures, to some extent, may reflect increased productivity. A similar increase in rates (63.1 percent) occurred in the textile industries. Rate advances in the metal products industries over the long period were slightly under the average for all manufacturing.

The postwar increase in wage rates shown by the urban wage rate index for manufacturing as a whole, as already noted, is almost the same as the increase from general wage changes alone. This also holds true for several of the individual industry groups, notably metal products, shipbuilding, rubber products, and petroleum. In other industries, the urban wage rate index shows an increase larger than the advance from general wage changes alone. On the other hand, part of the rise caused by general wage changes in basic iron and steel was offset by other factors, so that the full amount of the increase was not evident in the urban wage-rate index.

The variations that were found among industries in the postwar movement of wage rates were traceable to such factors as manpower shortages in low-wage consumer-goods industries, in which wage rates during the war had not increased proportionately with those of the war industries; changes in sex-composition of the labor force;<sup>11</sup> and increases in the proportion of all workers found in the lower range of rate brackets during the period of reconversion. Slackening of incentive earnings resulting from changes in products, materials shortages, and tightening of incentive standards was another factor affecting the trend of wage rates in some industries, although the consumer-goods industries, in which piecework is important, registered larger gains in the urban wage-rate index than the increases reported as general wage changes only. Had the index of urban wage rates in manufacturing been confined to time workers, the increase for manufacturing as a whole for the year April 1945 to April 1946 would have been approximately 1.5 percentage points greater than the increase for both time and incentive workers.

The upward trend of rates in individual industries during the year after VJ-day did not exactly follow the course of the increases granted in the major wage cases during the first months of 1946. In some industries, especially those which in previous months had been engaged in war production, the rise was substantially less than the amounts of the pattern-setting advances granted by major firms in the industry. In other industries, such as the textiles, the increases

<sup>11</sup> Although constant weights for sex groups normally prevent this factor from influencing the urban wage-rate index, women workers have disappeared from some occupations in which they were found during the war, and the weights for them were consequently dropped. The effect of these changes on the index is believed to be only slight.

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were somewhat greater than the typical general wage changes during the period. Failure of the urban series to follow the publicized pattern-setting general wage increases results primarily from the inclusion in the index of plants which gave varying amounts of general wage raises, averaging on an industry-wide basis less than the amount of increase given in the pattern-setting cases.<sup>12</sup>

## AREA COMPARISONS

The amount of postwar increase in manufacturing wage rates showed some variation among individual cities or wage areas, but, in general, there was remarkable uniformity. Of the 15 major cities for which separate postwar data can be presented (table 3), only 3 deviate more than 3 percentage points from the average advance for all manufacturing. The largest gains were made in Portland, Oreg., and Houston, Tex.; wartime gains in both of these cities had been well below the national average. The smallest postwar rise in rates occurred in Minneapolis. This city likewise had experienced relatively small war-

TABLE 3.—Percent of Change in Urban Wage Rates in Manufacturing, by Selected Area, April 1943–April 1946

Urban area	Percent of change from—						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945	Apr. 1945 to Apr. 1946	Apr. 1943 to Apr. 1946
Total, United States.....	+3.8	+1.9	+2.2	+1.6	<sup>1</sup> +2.4	+12.4	+23.5
Atlanta.....	+3.6	+1.4	+2.7	+2.9	+4.9	(2)	.....
Baltimore.....	+1.2	+1.6	+1.6	+5	(2)	+11.7	+17.2
Birmingham.....	+1.9	+3.5	+1.2	+4.1	(2)	+11.7	+24.2
Boston.....	+5.3	+1.6	+1.1	+3.7	+1.7	(2)	.....
Buffalo.....	+9.3	+2.3	+5	+1.8	(2)	+12.7	+29.0
Chicago.....	+3.1	+1.8	+3.0	+2.1	+3	(2)	.....
Cleveland.....	+5.3	+1.2	+2.7	+1.0	(2)	+9.6	+21.1
Dallas.....	+7.2	+1.9	+1.7	+2.4	+2.2	(2)	.....
Denver.....	+4.1	+3.3	+1.8	-2.1	+2.3	(2)	.....
Detroit.....	+5.9	+2	+3	0	-4	(2)	.....
Houston.....	+1.6	+2	+8	+1	(2)	+15.5	+18.7
Indianapolis.....	+3.6	+9	+1.4	+6	(2)	+12.2	+19.7
Kansas City.....	+1.4	+1.7	+1.7	+3.1	+9	(2)	.....
Los Angeles.....	+6.8	+1.5	+1.1	+1.2	+1.1	+12.7	+25.0
Louisville.....	+1.4	+3.9	+3.3	+1.3	(2)	+10.0	+21.3
Memphis.....	+3.8	+2.5	+2.0	+6.0	(2)	(2)	.....
Milwaukee.....	+2.7	+3	+3.1	+1.5	(2)	(2)	.....
Minneapolis.....	+2.8	+9	+1.2	+1.6	(2)	+7.4	+14.5
Newark.....	+6.4	+1.8	+2.8	+9	(2)	(2)	.....
New Orleans.....	+7.3	+5	+1.0	+1.0	(2)	+14.9	+26.4
New York.....	+5	+5.0	+6.4	+4.7	-3	+12.1	+31.7
Philadelphia.....	+2.1	+1.5	+2.3	+1.6	(2)	+12.7	+21.5
Pittsburgh.....	+1.0	+1.8	+2.2	-3	(2)	(2)	.....
Portland, Oreg.....	+5	-1	+8	+2	(2)	+16.2	+17.8
Providence.....	+2.6	+7	+2.3	+9	(2)	+10.0	+17.2
St. Louis.....	+4.9	+5.4	+1.0	+8	(2)	+10.6	+24.7
San Francisco.....	+9	+4	+8	0	(2)	(2)	.....
Seattle.....	+9	+2.4	+4	+3	+5	(2)	.....

<sup>1</sup> October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimate was obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

<sup>2</sup> Data not available.

<sup>12</sup> See footnote 4.



time wage increases in manufacturing industries. Its small postwar advance is attributable, at least in part, to reconversion problems in the metal-products industries, which employ a majority of the city's manufacturing workers.

### *Changes in Selected Nonmanufacturing Industries, April 1945 to April 1946*

Urban wage rates in the nonmanufacturing industries covered by the survey advanced more evenly between April 1945 and April 1946 than in manufacturing, the 10-percent annual increase being almost equally divided between the two 6-month periods (table 4). In contrast, the greater portion of the 12.4-percent rise in manufacturing occurred during the period October 1945–April 1946, and much of it was concentrated around the precedent-setting wage increases of the first 3 months in 1946.

TABLE 4.—Percent of Change in Urban Wage Rates in Selected Nonmanufacturing Industries, by Industry Group, April 1943–April 1946

Industry group <sup>1</sup>	Percent of change from—						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945 <sup>2</sup>	Oct. 1945 to Apr. 1946	Apr. 1943 to Apr. 1946
Total, selected industries.....	+6.4	+2.5	+4.2	+3.7	+4.1	+5.7	+29.7
Wholesale trade.....	+2.5	+2.0	+2.9	+1.5	+4.1	+4.3	+18.6
Retail trade.....	+9.2	+2.7	+5.7	+4.6	+5.5	+6.8	+39.7
Finance, insurance, and real estate.....	+3.9	+3.1	+1.6	+4.5	+1.7	+4.1	+20.3
Local utilities.....	+1.5	+1.1	+3	+1.5	+2.3	+10.1	+17.6
Service trades.....	+6.4	+2.4	+5.4	+3.2	+2.8	+4.1	+26.9

<sup>1</sup> The specific industries selected to represent these groups in the measurement of wage-rate changes were as follows: *Wholesale trade*—general-line wholesale groceries; *retail trade*—department stores, clothing stores, and groceries; *finance, insurance, and real estate*—banks and savings and loan associations; *local utilities*—electric light and power or gas companies; *service trades*—hotels, power laundries, and auto-repair shops.

<sup>2</sup> October 1945 estimates were revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimates were obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

*Type of wage-rate changes.*—The increases in nonmanufacturing industry wages were largely the result of wage adjustments for individual workers rather than of general or across-the-board wage increases, such as occurred in manufacturing. In the period between August 18, 1945, and April 1946, for example, an estimated 41 percent of all the workers in the selected nonmanufacturing industries received

general wage increases, whereas about 79 percent of all manufacturing workers were given such raises.<sup>13</sup> Nevertheless, the over-all increase in nonmanufacturing rates between April 1945 and April 1946 was only 2.4 percentage points less than the increase in manufacturing.

#### WAGE INCREASES IN INDIVIDUAL INDUSTRIES

Local utilities and retail trade made the greatest advances in rates during the 1-year period of all the five nonmanufacturing industry groups studied. Moreover, the gains registered by them (12.6 and 12.7 percent, respectively) compared more favorably with gains in manufacturing industries than did the increases in the finance industries, the service trades, and wholesale trade, which were all less than 10 percent (table 4).

Only the utilities group had received general or across-the-board increases in rate scales that approximated the advance in the urban wage-rate index. More than 95 percent of the workers in this group are estimated to have benefited from general wage increases following VJ-day, as contrasted with about half of the employees in wholesale trade and approximately one-third in retail trade, the service trades, and the finance group.<sup>13</sup>

#### AREA COMPARISONS

The nonmanufacturing urban wage-rate indexes of individual wage areas showed a great deal of variation in amounts of increase, ranging from 4.7 percent (in Cleveland) to 18.3 percent (in Minneapolis) between April 1945 and April 1946 (table 5). In 9 of the 15 cities for which separate data can be shown, rates had advanced by more than the national average, and these include such widely separated areas as Providence, New Orleans, Baltimore, and Buffalo. Among the cities showing lower-than-average increases are New York City, Cleveland, Houston, and Portland, Oreg.

These variations cannot be ascribed to differences in industrial composition of the city indexes, as the nonmanufacturing indexes, unlike manufacturing indexes, represent the same industries in all cities. Individual city trends in nonmanufacturing wage rates during the past year apparently have been influenced by such factors as labor supply and the size of wartime wage increases.

<sup>13</sup> See footnote 4.



TABLE 5.—Percent of Change in Urban Wage Rates in Selected Nonmanufacturing Industries, by Selected Area, April 1943–April 1946

Urban area	Percent of change from—						
	Apr. 1943 to Oct. 1943	Oct. 1943 to Apr. 1944	Apr. 1944 to Oct. 1944	Oct. 1944 to Apr. 1945	Apr. 1945 to Oct. 1945	Apr. 1945 to Apr. 1946	Apr. 1943 to Apr. 1946
Total, United States.....	+6.4	+2.5	+4.2	+3.7	<sup>1</sup> +4.1	+10.0	+29.7
Atlanta.....	+9.8	+3.6	+6.3	+5.6	+1.3	( <sup>2</sup> )	
Baltimore.....	+6.0	+3.3	+2.7	+3.6	( <sup>2</sup> )	+14.6	+33.5
Birmingham.....	+9.2	+2.6	+8.8	+2.2	( <sup>2</sup> )	+11.2	+38.5
Boston.....	+2.9	+2.8	+3.3	+4.1	+1.9	( <sup>2</sup> )	
Buffalo.....	+3.3	+1.0	+2.0	+2.0	( <sup>2</sup> )	+11.9	+21.5
Chicago.....	+8.8	+2.7	+6.3	+3.8	+2.6	( <sup>2</sup> )	
Cleveland.....	+7.0	+4.0	+3.5	+1.9	( <sup>2</sup> )	+4.7	+22.8
Dallas.....	+8.7	+12.1	+8	+2.1	+1.0	( <sup>2</sup> )	
Denver.....	+2.9	+2.2	+3.3	+4.9	+2.3	( <sup>2</sup> )	
Detroit.....	+15.2	+8	+5.5	+2.5	+3.4	( <sup>2</sup> )	
Houston.....	+13.5	+2.5	+3.2	+1.7	( <sup>2</sup> )	+6.9	+30.5
Indianapolis.....	+4.0	+3.2	+2.1	—3	( <sup>2</sup> )	+11.7	+22.0
Kansas City.....	+8.6	+2.9	+1.1	+5.7	+5.5	( <sup>2</sup> )	
Los Angeles.....	+5.0	+1.3	+3.0	+2.5	+7.6	+17.0	+31.4
Louisville.....	+7.4	+7.8	+2.6	+4.0	( <sup>2</sup> )	+6.3	+31.4
Memphis.....	+11.6	+7	+8.7	+7	( <sup>2</sup> )	( <sup>2</sup> )	
Milwaukee.....	+9.8	+1.2	+4.6	+3.5	( <sup>2</sup> )	( <sup>2</sup> )	
Minneapolis.....	+4.8	+2.6	+7.6	—4.1	( <sup>2</sup> )	+18.3	+31.3
Newark.....	+8.5	+3.9	+3.8	+2.4	( <sup>2</sup> )	( <sup>2</sup> )	
New Orleans.....	+14.5	+4.1	+1.7	+2.1	( <sup>2</sup> )	+13.6	+40.7
New York.....	+5.4	+1.9	+3.2	+6.2	+1.9	+9.1	+28.5
Philadelphia.....	+9.1	+3.5	+1.9	+4.2	( <sup>2</sup> )	+11.2	+33.3
Pittsburgh.....	+3.3	+2.4	+2.1	+2.3	( <sup>2</sup> )	( <sup>2</sup> )	
Portland, Oreg.....	+2.6	+1.7	+6.6	—1.0	( <sup>2</sup> )	+6.8	+17.5
Providence.....	0	+2.4	+1.3	+5.6	( <sup>2</sup> )	+13.4	+24.2
St. Louis.....	+7.5	+3.2	+3.9	+3.5	( <sup>2</sup> )	+11.3	+32.7
San Francisco.....	+1.7	+1.6	+5.9	—2.0	( <sup>2</sup> )	( <sup>2</sup> )	
Seattle.....	+2	+1.3	+4.0	+4	+2.8	( <sup>2</sup> )	

<sup>1</sup> October 1945 estimates revised on basis of more precise data obtained in connection with the April 1946 survey. Previously published October estimate was obtained from a survey of 18 of the 69 cities usually represented in the Bureau's indexes of urban wage rates.

<sup>2</sup> Data not available.

## The Labor Force in the First Year of Peace

RECONVERSION of the Nation's labor force was virtually completed by the end of the first year of peace. During the 1-year period following VJ-day, more than 10 million servicemen were demobilized, and absorbed into civilian pursuits. In addition, approximately 4.5 million "extra" wartime workers, principally women and teen-age youth, left the labor market to resume their peacetime activities at home and in school. Many more millions of workers shifted over from war to civilian production. Yet, at no time during this period was unemployment a critical problem, and the year ended with employment at record levels.

### *Industrial Reconversion*

The postwar reshaping of the size and distribution of the United States' work force can best be viewed against the background of developments in both production and employment.

Immediately after VJ-day, war production—representing two-thirds of the industrial output of the Nation—was virtually shut off. Nevertheless, labor demand was so well sustained that the initial impact of war-contract cancellation reduced employment by only 2 million. Within 2 months after the war's end, the transition downswing was halted and employment turned upward.

Supporting the demand for labor was an unprecedented demand for all kinds of goods and services which had been unavailable or in short supply for 3 or 4 years. The demand was reenforced by accumulations of wartime savings. Retail sales broke all records during the Christmas shopping season of 1945 and continued at record levels during the first half of 1946. By summer, the production of goods and services for civilian use was well above the prewar peak. But with individual incomes and consumer spending exceeding wartime levels, the supply of many items had not yet caught up with the demand.

### INDUSTRIAL SHIFTS

Virtually all of the employment increase during the first year of peace took place in nonagricultural industries (table 1). Even though about a million World War II veterans were working on farms by August 1946, the net increase in agricultural employment was relatively small, as there were declines among the women, teen-age boys, older men, and foreign workers who had been recruited to meet peak seasonal needs during the war.

<sup>1</sup> Prepared by Leonard Eskin with the assistance of Irving Gedanken in the Bureau's Occupational Outlook Division.

TABLE 1.—Total Labor Force in the United States, Classified by Employment Status and Sex, Selected Months, 1940-46<sup>1</sup>

[In thousands]

Employment status	April 1940	April 1945 <sup>2</sup>	August 1945 <sup>2</sup>	August 1946	Net change	
					April 1940 to April 1945	August 1945 to August 1946
Total labor force.....	53,740	64,030	66,510	62,380	+10,290	-4,130
Armed forces.....	430	12,100	12,160	2,380	+11,670	-9,780
Civilian labor force.....	53,310	51,930	54,350	60,000	-1,380	+5,650
Unemployment.....	7,800	770	830	2,040	-7,030	+1,210
Employment.....	45,510	51,160	53,520	57,960	+5,650	+4,440
Nonagricultural.....	36,530	43,410	44,470	48,830	+6,880	+4,360
Agricultural.....	8,980	7,750	9,050	9,130	-1,230	+80
Male labor force, total.....	40,650	45,670	46,910	45,170	+5,020	-1,740
Armed forces.....	430	11,830	11,890	2,340	+11,400	-9,550
Civilian labor force.....	40,220	33,840	35,020	42,830	-6,380	+7,810
Unemployment.....	5,970	430	430	1,580	-5,540	+1,150
Employment.....	34,250	33,410	34,590	41,250	-840	+6,660
Nonagricultural.....	25,960	26,940	27,700	33,940	+980	+6,240
Agricultural.....	8,290	6,470	6,890	7,310	-1,820	+420
Female labor force, total.....	13,090	18,360	19,600	17,210	+5,270	-2,390
Armed forces.....		270	270	40	+270	-230
Civilian labor force.....	13,090	18,090	19,330	17,170	+5,000	-2,160
Unemployment.....	1,830	340	400	460	-1,490	+60
Employment.....	11,260	17,750	18,930	16,710	+6,490	-2,220
Nonagricultural.....	10,570	16,470	16,770	14,890	+5,900	-1,880
Agricultural.....	690	1,280	2,160	1,820	+590	-340

<sup>1</sup> Source: U. S. Bureau of the Census, Monthly Report on the Labor Force.

<sup>2</sup> In July 1945, the Census Bureau adopted an improved interviewing procedure which resulted in a more accurate count of persons in the labor force. For this reason, labor force data for the period prior to July 1945 are not strictly comparable to data subsequent to that date. In July 1945, the new technique resulted in a larger estimate of employment than the old, and a slightly smaller estimate of unemployment.

All major divisions of nonagricultural employment gained over the year except the principal munitions-producing industries and the Federal war agencies (table 2 and chart 1). The loss of 2.5 million workers in war activities was overbalanced by substantial gains elsewhere, especially in construction, trade and service, light manufacturing industries, and building materials.

Construction employment more than doubled. The rise was not even interrupted during the winter when a seasonal slump normally would have been expected. In August 1946, construction workers numbered 2.1 million, which was about half a million short of the peak reached in 1941. Employment in trade and service—up 1.3 million in the year after VJ-day—was at the highest midsummer level on record. Mining was the only industrial division which ended the year below its prewar level.

#### CHANGES IN UNEMPLOYMENT

In view of the sudden end of war activities and the demobilization of 6 million servicemen in the first 5 months, there was remarkably little unemployment during the first year of peace. Nevertheless, there was a striking rise immediately after VJ-day. Initial claims



TABLE 2.—*Estimated<sup>1</sup> Number of Employees in Nonagricultural Establishments, by Industry Division, August 1939-46<sup>2</sup>*

[In thousands]

Industry division	August—				Net change			Percent-age distribution	
	1939	1943	1945	1946 <sup>3</sup>	1939 to 1943	1943 to 1945	1945 to 1946	1939	1946
Total, all industries.....	30, 713	40, 414	38, 172	39, 881	+9, 701	-2, 242	+1, 709	100. 0	100. 0
Manufacturing, total.....	10, 117	17, 736	15, 019	14, 586	+7, 619	-2, 717	-433	32. 9	36. 6
Metals, chemicals, and rubber <sup>4</sup> .....	( <sup>5</sup> )	( <sup>5</sup> )	7, 944	6, 567	( <sup>5</sup> )	( <sup>5</sup> )	-1, 377	( <sup>5</sup> )	16. 5
Building materials and furniture <sup>5</sup> .....	( <sup>5</sup> )	( <sup>5</sup> )	1, 352	1, 621	( <sup>5</sup> )	( <sup>5</sup> )	+269	( <sup>5</sup> )	4. 1
Soft goods except chemicals and rubber <sup>6</sup> .....	( <sup>5</sup> )	( <sup>5</sup> )	5, 723	6, 398	( <sup>5</sup> )	( <sup>5</sup> )	+675	( <sup>5</sup> )	16. 0
Mining.....	853	882	784	829	+29	-98	+45	2. 8	2. 1
Contract construction and Federal force account construction.....	2, 088	1, 169	927	2, 109	-919	-242	+1, 182	6. 8	5. 3
Transportation and public utilities.....	2, 947	3, 694	3, 860	4, 000	+747	+166	+140	9. 6	10. 0
Trade.....	6, 513	6, 875	6, 979	7, 803	+362	+104	+824	21. 2	19. 6
Finance, service, and miscellaneous.....	4, 223	4, 172	4, 666	5, 160	-51	+494	+494	13. 8	12. 9
Government, total.....	3, 972	5, 886	5, 937	5, 394	+1, 914	+51	-543	12. 9	13. 5
Federal war agencies <sup>7</sup> .....	153	2, 134	2, 003	1, 117	+1, 981	-131	-886	. 5	2. 8
Other Federal.....	704	793	916	1, 129	+89	+123	+213	2. 3	2. 8
State and local.....	3, 115	2, 959	3, 018	3, 148	-156	+59	+130	10. 1	7. 9

<sup>1</sup> Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded. Not comparable with estimates for nonagricultural employment of the civilian labor force presented in table 1 because latter include self employed, proprietors, and domestic servants and are based on population enumeration<sup>4</sup> whereas estimates in this table are based on establishment reports.

<sup>2</sup> Source: U. S. Bureau of Labor Statistics, Employment Statistics Division and Division of Construction and Public Employment.

<sup>3</sup> These were the major munitions-producing industries. They include iron and steel and their products; electrical machinery; machinery except electrical; transportation equipment except automobiles; automobiles; nonferrous metals and their products; chemicals and allied products; and rubber products.

<sup>4</sup> Not available.

<sup>5</sup> Includes lumber and timber basic products; furniture and finished lumber products; and stone, clay, and glass products.

<sup>6</sup> Includes textile-mill products and other fiber manufactures; apparel and other finished textile products; leather and leather products; food; tobacco manufactures; paper and allied products; printing, publishing, and allied industries; products of petroleum and coal; and miscellaneous industries.

<sup>7</sup> Includes War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, and the emergency war agencies.

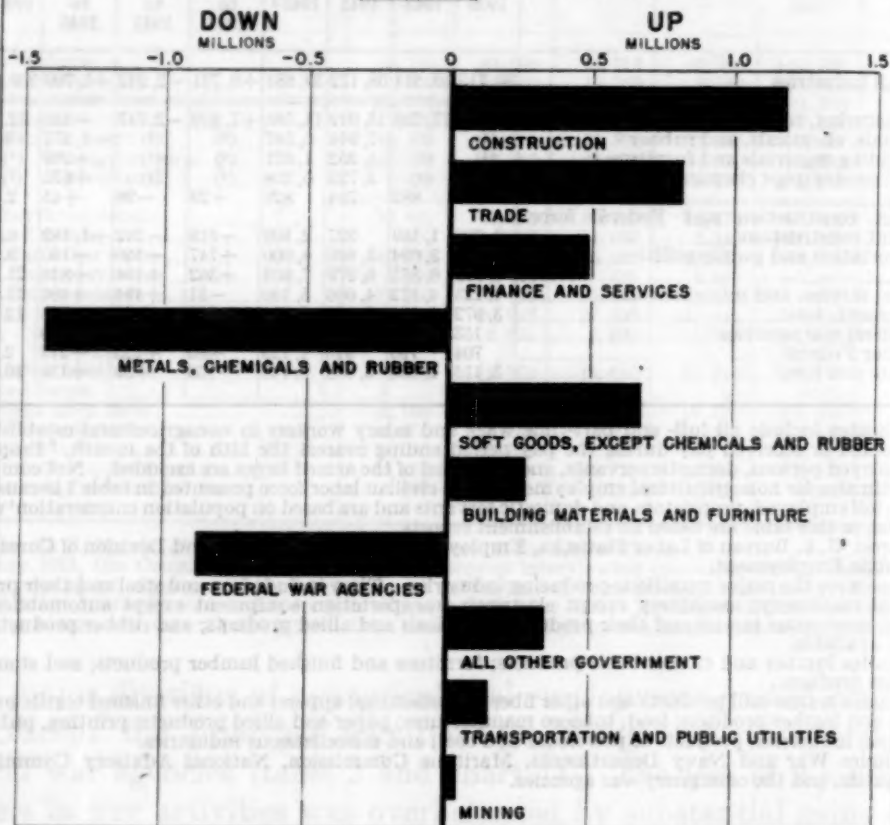
for unemployment compensation jumped from 60,000 in the week before VJ-day to 600,000 in the week after. By early September, the total number unemployed as measured by the Census Bureau rose to 1,650,000—double the total recorded a month earlier, just before the war's end.

As pointed out above, employment recovered quickly from the shock of war-end production cuts, so that there was no great rise in unemployment during the next 2 months. In November, however, veterans began to pour into the civilian labor market at the rate of well over a million a month. The great majority of them obtained jobs quickly, but there were naturally some delays involved in getting placed. From November to March, unemployment rose by about 1 million to a postwar peak of 2.7 million, and ex-servicemen accounted for three-fourths of the rise. After March, the unemployment total receded and in August 1946—1 year after VJ-day—it was approximately 2 million. With 2 million looking for work out of a total

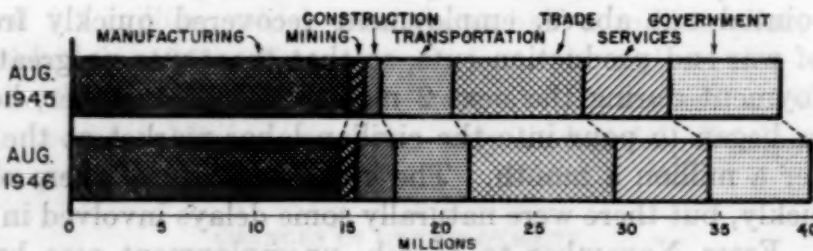
CHART 1

## EMPLOYMENT BALANCE SHEET VJ - DAY PLUS ONE YEAR

**GAINS** IN WAR-RESTRICTED INDUSTRIES HAVE MORE  
THAN OFFSET **LOSSES** IN WAR WORK—



**SO THAT NON-FARM EMPLOYEES ARE ABOUT  
1½ MILLION ABOVE THE VJ - DAY LEVEL**



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civilian labor force of 60 million, the rate of unemployment was about as low as it had ever been in peacetime.

Despite the relatively low unemployment total, many of the unemployed were experiencing real difficulty in getting placed. One out of every four had been seeking work for 4 months or longer as compared with a corresponding ratio of only 1 in 12 among those looking for work a year earlier. Likewise one-fourth of the veterans receiving unemployment benefits under the GI Bill of Rights had been on the rolls for 20 weeks or longer. Some of the most difficult placement problems were among the younger ex-servicemen with no previous civilian-work experience.

### *Labor Supply*

In the year following the end of the war, the civilian labor force expanded by more than 5.5 million persons. This rise represented the net effect of the inflow of discharged veterans and the exodus of "extra" wartime workers drawn from among housewives, students, and others not ordinarily in the labor market.

#### ABSORPTION OF VETERANS

The personal, social, and economic readjustment of the men and women in our armed forces was the biggest reconversion job that faced the Nation during the first year of peace. On VJ-day, about 2.5 million veterans of World War II were in the civilian population; a year later the total was about 13 million. Of the 10.5 million returned to civilian life during the year, more than 7 million were discharged within 6 months after the end of the war.

Because of the generally favorable employment situation, most of the veterans who sought work were quickly absorbed into civilian jobs. By August 1946, employment of ex-servicemen exceeded 10 million as compared with less than 2 million a year earlier.<sup>2</sup> One out of every four men holding jobs at the end of the first year of peace was a veteran.

During the period of heavy demobilization from October to March, when 1 to 1.5 million ex-servicemen entered the civilian labor force each month, it was to be expected that even slight delays in finding jobs would result in a substantial volume of unemployment. Thus, the number of veterans seeking work reached a peak of 1,200,000 early in March 1946. Between July and August, however, less than 200,000 returned to the civilian labor force; yet there were 840,000 veterans still unemployed in August. This suggests that many were

<sup>2</sup> The figures on employment status of veterans cover men only. Source: U. S. Bureau of the Census; Monthly Report on the Labor Force.

having difficulty finding jobs despite the strong general demand for labor. The unemployment rate for veterans (about 8 percent of those in the labor force) was more than three times the rate for other men.

The volume of unemployment among veterans was, no doubt, kept down because they generally took time out for vacations before entering the labor force. In January 1946, as many as 1.7 million were out of the labor force for this reason; in August there were still about 900,000 who had not yet started to look for jobs. About half a million others remained out of the labor force in order to devote full time to the schooling available to them under the GI Bill of Rights or under the vocational training program for disabled veterans.

Those in full-time schooling were by no means all who were availing themselves of the opportunities offered by the program for veterans' education and training. Many others were going to school and working or taking on-the-job training. In all, about 700,000 were in school and 500,000 in training on the job in August. In addition, applications had been approved for 2 million who had not yet started to take their education or training. The number of veterans in schools and colleges was expected to move sharply upward with the beginning of the school term in the autumn.

#### WOMEN

The experience of women in the labor force during the war and in the first year of peace was just the reverse of that of veterans. When young men left their civilian jobs to enter the armed services during the war, millions of women who ordinarily would not have sought work outside the home took jobs to replace them. When the veterans returned to civilian work, the women went back to full-time homemaking duties. Of course the transition was not as smooth as it appears from this over-all statement. Many of the women displaced at the war's end would have been workers even in ordinary times. They had to find other jobs. On the other hand, many of those who were not displaced quit voluntarily.

In the 5 years between the start of the National Defense Program in 1940 and the end of the war in Europe in the spring of 1945, almost 6 million women entered the labor force. This increase is approximately equal to the gain during the 30 years from 1910 to 1940—a period when the idea of women working outside the home first gained wide acceptance.

The cut-backs in war production and the demobilization of some servicemen after VE-day had an immediate effect on the number of women workers. Between VE- and VJ-days, about 1 million adult women left nonagricultural jobs. The great majority of them dropped

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out of the labor force, as there was no corresponding rise in unemployment.

After VJ-day, the exodus of women from the labor force gained momentum. In the short space of 6 months, the number of women employed shrank by about 2 million over and above the decrease of 1.5 million seasonal workers—mostly farm women—that usually occurs between August and February. Again, the decline in employment was reflected primarily in a shrinkage of the labor force rather than an increase in unemployment.

#### *Women in Manufacturing*

As would be expected, the greatest decline in female employment took place in the shipyards, aircraft plants, steel mills, machine shops, and other heavy manufacturing industries—not only because these were in general the hardest hit by the cessation of war production, but also because they had utilized women during the war to a much greater extent than was customary in peacetime. Before the war, women made up only 9 percent of the production workers in plants turning out durable goods. During the war, the proportion of women workers rose to a peak of about 24 percent. At the war's end, it was 22 percent. Although there was a sharp decline after VJ-day, a significant part of the wartime gain was still retained in June 1946 (latest date for which figures are available) when the proportion of women workers was 13 percent—almost half again as great as the prewar percentage. If experience after World War I is repeated, at least part of this increase will be retained permanently.

In the light manufacturing industries which traditionally employ a considerable proportion of female workers, the wartime change in the percentage of women employed was less spectacular. The proportion of women rose from 40 percent in 1939 to 45 percent during the war and dropped back to 41 percent by June 1946.

#### WITHDRAWALS FROM THE LABOR FORCE

Perhaps the most striking labor-market phenomenon demonstrated during the war was the flexibility of the Nation's labor supply. Approximately 8 million persons who would not have been expected to work or seek work in peacetime entered the wartime labor force.<sup>3</sup> To some extent, this resulted from the drafting of young men who might otherwise have stayed in school; but for the most part, it was a voluntary response to wartime pressures such as an abundance of jobs at good pay, need for dependents of servicemen to supplement their family allowances, and patriotic desire to aid in the war effort.

<sup>3</sup> For a discussion of the characteristics of extra workers in the wartime labor force, see Sources of Wartime Labor Supply in the United States, Monthly Labor Review, August 1944 (p. 264).



The number of extra workers drawn from housewives, students, and others not ordinarily in the labor market declined from a peak of 8 million in April 1945—the last month of the two-front war—to 2.5 million in August 1946. About 1 million of this decline occurred between VE- and VJ-days, and the remainder took place after the war ended. The estimated number of extra workers for selected months since April 1945 is shown in the following tabulation and detailed by age and sex in table 3.<sup>4</sup>

	<i>Extra workers (in millions)</i>
April 1945.....	8.1
August 1945 (VJ-day).....	7.0
April 1946.....	3.3
August 1946.....	2.5

The 5.6 million extra workers who withdrew from the labor market by August 1946 may be divided into the following broad groups (chart 2):

	<i>Decline in extra workers, April 1945 to August 1946 (in millions)</i>
Women aged 20-34 years.....	1.5
Women aged 35 years and over.....	1.4
School-age group (teen-agers of both sexes and men aged 20-24).....	2.6
Men aged 25 years and over.....	.1

#### *Young Women*

The young women aged 20 to 34 years quit the labor force chiefly because their husbands returned from the armed forces or they married returning veterans. Even during the war, the number of young women workers was limited because of the increased family responsibilities accompanying the unusually large number of marriages and births. After 1 year of peace, the number of young women workers was actually 1 million below the "normal" level based on prewar trends. Except in the event of a severe depression—which would cut down on the number of marriages and births and force many young women to seek jobs in order to bolster reduced family incomes—it is likely that the number of young women in the labor force will remain below the prewar "normal" at least for the rest of the decade.

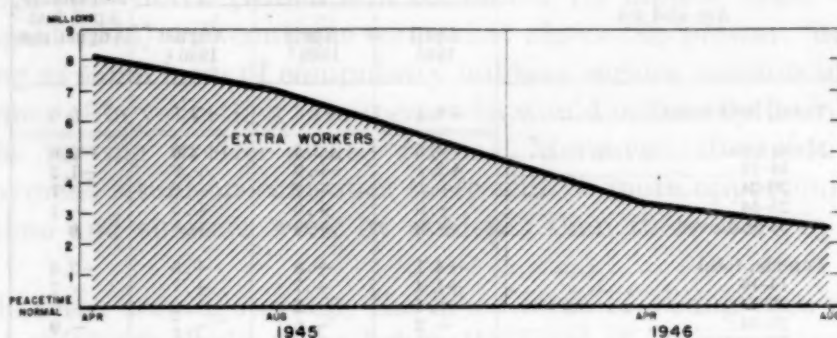
<sup>4</sup> Estimates of extra workers are based on comparisons between the size of the labor force as reported on any given date and the "normal" labor force that would be expected for that date. Estimates of "normal" labor force are based on trends in the rate of labor-market participation by age and sex for the period 1920 to 1940. They represent the labor force that would have been expected if the trends of peacetime years had continued after 1940 and if economic conditions similar to those of 1940 had prevailed. They serve as a useful base against which to measure the wartime mobilization of the labor force as well as postwar demobilization.



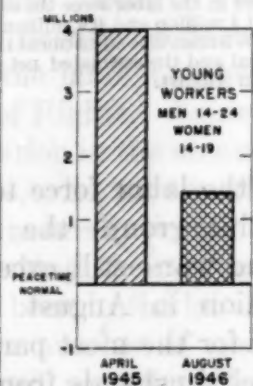
CHART 2

## RECONVERSION OF THE LABOR FORCE

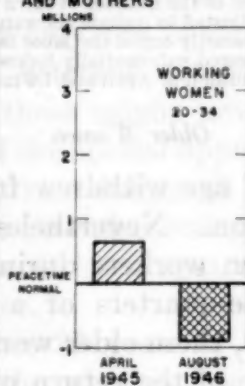
EXTRA WARTIME WORKERS HAVE DROPPED FROM 8 TO 2½ MILLION—



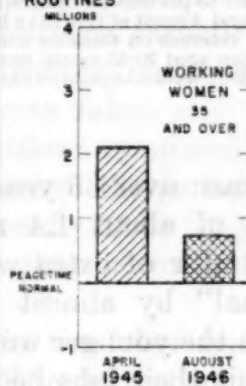
AS YOUNGSTERS RETURNED TO SCHOOL



YOUNG WOMEN BECAME HOUSEWIVES AND MOTHERS



AND OLDER WOMEN RESUMED PEACETIME ROUTINES



BUT WITH MILLIONS OF VETERANS POURING BACK IN, THE CIVILIAN LABOR FORCE HAS REACHED RECORD LEVELS

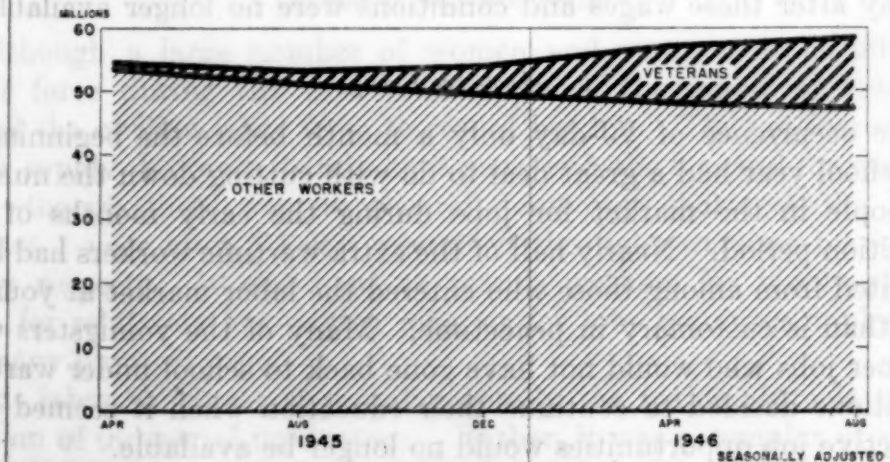
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TABLE 3.—*Estimated Deviation of Labor Force From "Normal"—April 1945, April 1946, and August 1946*

[In millions]

Age and sex	Deviation from "normal" <sup>1</sup>			Net change, April 1945— August 1946
	April 1945	April 1946 <sup>2</sup>	August 1946 <sup>2</sup>	
Total, both sexes.....	+8.1	+3.3	+2.5	-5.6
Male, total.....	+4.0	+2.5	+2.0	-2.0
14-19.....	+2.1	+0.9	+0.9	-1.2
20-24.....	+0.5	+0.2	-0.2	-0.7
25-54.....	+0.6	+0.6	+0.5	-0.1
55 and over.....	+0.8	+0.8	+0.8	0
Female, total.....	+4.1	+0.8	+0.5	-3.6
14-19.....	+1.4	+0.7	+0.7	-0.7
20-24.....	+0.4	-0.2	-0.2	-0.6
25-34.....	+0.2	-0.6	-0.7	-0.9
35 and over.....	+2.1	+0.9	+0.7	-1.4

<sup>1</sup> Based on comparisons between estimates of actual labor force (including armed forces) adapted from Census Bureau reports and "normal" labor force projected from trends between 1920 and 1940 (adapted from Census Release P-44, No. 12).

<sup>2</sup> In order to prevent an understatement of the number of extra workers in the labor force the estimates for April and August of 1946 have been adjusted to include allowances of 1.1 million and 0.9 million respectively for veterans on vacation and temporarily out of the labor force. Without this adjustment the labor force of men aged 20-35 would have appeared substantially below normal and the estimated net total of extra workers would have been only 2.2 million in April and 1.6 million in August.

#### Older Women

Women over 35 years of age withdrew from the labor force to the extent of about 1.4 million. Nevertheless, this group—the main contributor of extra women workers during the war—still exceeded "normal" by almost three-quarters of a million in August 1946. Unlike the younger women, these older workers for the most part did not quit their jobs because of the return of their husbands from the armed forces or because they married after the war. It is probable that many of them who entered the labor force because of the attractive wages and working conditions offered in war work were unwilling to stay after these wages and conditions were no longer available to them.

#### School-Age Groups

The occurrence of VJ-day only a month before the beginning of the school year had a great deal to do with cutting down the number of people in the market for jobs during the early months of the transition period. Nearly half of the extra wartime workers had been recruited from among those who entered the labor market at younger ages than is customary in peacetime. Many of the youngsters with summer jobs who would not have gone back to school under wartime conditions decided to continue their education when it seemed that attractive job opportunities would no longer be available.

In all, the group of extra workers drawn primarily from schools and colleges declined by 2.6 million during the first year of peace.

A further substantial reduction was expected in the autumn, not only because of the large number of veterans to be enrolled in schools and colleges, but also because of the general reestablishment of prewar habits of longer school attendance. It is likely, however, that the teen-age labor force (which still contained 1.4 million extra workers in August 1946) will continue somewhat above the prewar "normal." As long as some form of compulsory military service remains in effect, a number of boys in their late teens who would ordinarily be in college will be serving in the armed forces. Moreover, if the favorable employment situation continues there will be more opportunities for part-time and summer work by students than there were in prewar days.

Unlike the teen-age group, the labor force of young men in their early twenties is likely to be below the level of prewar expectations for the next few years. Although this group exceeded "normal" by half a million during the war, it had dropped to a point 200,000 below "normal" after 1 year of peace. The deficit of workers in their early twenties reflects not only the effect of wartime casualties but also the large number of veterans attending college under the GI Bill of Rights. Some of these might never have taken any higher education in the absence of the special opportunities now offered them; others, who were in the service during all or part of the period when they normally would have attended college (usually 18 to 22 years), are taking their education at later ages when they normally would have been in the labor force.

The number of men over 25 years of age in the labor force has declined very little from the wartime peak. The indication is that most of the 1.4 million extra workers drawn from this group during the war will remain in the labor force as long as there is a demand for their services.

#### LABOR SUPPLY PROSPECTS

Although a large number of women and young persons left the labor force during the first year of peace, the inflow of veterans raised the civilian labor force to record heights. The net increase in labor supply, however, barely kept pace with the demand for workers and—though there was no general manpower shortage—the labor market 1 year after VJ-day resembled the tight wartime market in many respects. It was hard to recruit workers for highly skilled jobs, for relatively low-paying jobs, or for jobs requiring unpleasant or heavy physical work.

But labor shortages were not generally the major obstacle to expansion of industrial production. Rather, it was a complex of shortages of materials and parts, limited plant capacity, and transportation difficulties. Although employment prospects were still favorable, it



appeared that the flow of finished goods might be stepped up considerably without a proportionate rise in employment.

Demand for labor was still very strong as the first year of peace ended and there were no prospects for an early easing of the tight labor-market situation. By no means, however, had all available sources of labor supply been exhausted. The number of unemployed men—although only 1.6 million—was still three and a half times the war-end level and more than half of them were veterans. Another million ex-servicemen were on temporary vacation and had not yet started to look for work. In addition, some 1 million men were scheduled to be released from the armed forces within 6 months. Hiring specifications were more rigid than during the war and an easing of requirements for the more desirable jobs might be expected to draw back some of the extra wartime workers—particularly the women without responsibility for the care of young children.

Partially offsetting these potential additions to the civilian labor supply were the expected induction or enlistment of 300,000 men into the armed forces within 6 months and the continued withdrawal of extra workers from the school-age group. On balance, it appeared that a net total of about 1.5 million additional workers could be supplied during the second year of peace from a combination of sources including the unemployed, the veterans, wartime workers reentering the labor force, and normal population growth.



## Labor Requirements in Production and Distribution of Concrete Masonry Units and Concrete Pipe<sup>1</sup>

CONSTRUCTION activity, especially in residential and GI housing, continues at a high rate in spite of material and manpower shortages. Employment at the construction site has increased markedly in the past 12 months. At the same time there has been increased employment in most of the industries producing the building materials used. The present study is the second in the series of labor-requirements studies of the more important building materials, undertaken by the Bureau of Labor Statistics, to determine the indirect labor involved in any construction activity.<sup>2</sup>

### *Man-Hour Requirements for Concrete Block*

From basic plant records it was found that approximately 30.2 man-hours were required at the plant to manufacture 1,000 concrete blocks. In addition to the man-hours necessary for plant manufacture, it was estimated that 38.8 man-hours were needed to extract the raw materials used, to haul these materials to the plant, and to deliver the finished product to the construction site. Similar estimates were made for the production of block in which lightweight and heavyweight aggregates, respectively, were used.

	Man-hours per 1,000 blocks		
	All blocks (average)	Lightweight	Heavy- weight
Total production and transportation.....	69.0	64.8	74.0
Raw materials, production, and transportation <sup>1</sup> ....	29.2	23.2	36.6
Manufacturing.....	30.2	32.4	27.4
Transportation, finished product.....	9.6	9.2	10.0

<sup>1</sup> Includes purchased electric power.

Significant variations were noted in man-hour requirements when the data were analyzed according to rate of production, the number of molding machines per plant, and type of aggregates used. Plants producing at a monthly rate of less than 50,000 blocks required 74.5 man-hours per 1,000 blocks, while those producing at a rate of 350,000 blocks or more required only 23.1 man-hours for each 1,000 blocks produced. Labor requirements in plant operations varied from 34.3 man-hours, for plants having one molding machine, to 24.9 man-hours,

<sup>1</sup> Prepared in the Bureau's Division of Construction and Public Employment by Alfred W. Collier and Clyde Stone, under the direction of Brunswick A. Bagdon.

A detailed description of the production processes and a comprehensive analysis of the labor requirements in the production and distribution of concrete products will appear in a forthcoming bulletin.

<sup>2</sup> The first study in this series covered labor requirements in cement production and was summarized in the September issue of the Monthly Labor Review.

for plants having 3 or more molding machines. The manufacture of lightweight blocks required 32.4 man-hours per 1,000 blocks as compared with 27.4 man-hours necessary for the production of 1,000 heavyweight blocks.

#### PRODUCTION AND TRANSPORTATION OF RAW MATERIALS

The principal raw materials used in the production of concrete block are (1) cement and (2) aggregates, which fall into two classifications, lightweight and heavyweight. Cinders, expanded slag, and burned clay and shale are the principal lightweight aggregates, whereas sand and gravel or crushed stone are the most commonly used heavyweight aggregates.

The quantities of raw materials, including electric power, and the man-hour requirements for these materials are shown below, by type of block, for the production of 1,000 blocks.

Raw materials:		Requirements per 1,000 blocks		
		All blocks (average)	Light- weight	Heavy- weight
Cement.....	barrels.....	10.9	12.2	9.2
Sand and gravel.....	tons.....	13.3	----	30.2
Cinders.....	tons.....	7.6	13.6	----
Electric power.....	kw. hr.....	56.3	51.2	62.7
Man-hours:				
Cement.....		10.9	12.2	9.2
Sand and gravel.....		12.0	----	27.2
Cinders.....		6.1	10.8	----
Electric power.....		.2	.2	.2
Total.....		29.2	23.2	36.6

The quantities of cement and electric power shown above for all types of block are average quantities required for all plants (producing either lightweight or heavyweight blocks) included in the survey. Similarly, the quantities of sand and gravel and cinders are weighted averages of heavyweight and lightweight aggregates required for the production of the two types of block. The quantities shown separately for lightweight and heavyweight blocks are those required when production is confined to each respective product.

In 1945-46 the man-hour requirements for the production and transportation of 100 barrels of cement were 100.49, and 3.12 man-hours were required to produce 1,000 kilowatt-hours of electric power.<sup>3</sup> In the manufacture of 1,000 blocks it was determined from these figures that the labor requirements were 10.9 man-hours for the 10.9 barrels of cement used, and 0.2 man-hour was expended in providing the 56.3 kilowatt-hours of electric power consumed.

<sup>3</sup> See Labor Requirements in Cement Production, in Monthly Labor Review, September 1946.

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The production and distribution of sand and gravel, the principal heavyweight aggregates, required an average of 0.9 man-hour in 1937.<sup>4</sup> In the absence of information for the current period, these data were used as a basis for estimating the labor requirements for sand and gravel. It was therefore estimated that 12.0 man-hours were needed for the production and transportation of the 13.3 tons of sand and gravel used in the production of 1,000 blocks. While other heavyweight aggregates, such as crushed stone, untreated blast-furnace slag, etc., are sometimes used, sand and gravel are predominant in use, and are considered as representative of all heavyweight aggregates in this study.

Since cinders are a waste product resulting from the combustion of coal, no man-hours were estimated for the production of this material. The estimate of man-hour requirements for this material include those necessary to transport the cinders to the plant and its preparation at the plant after delivery. The labor requirements for the transportation of cinders are similar to those for sand and gravel. From a previous Bureau of Labor Statistics study, it was found that 0.6 man-hour was necessary to transport 1 ton of sand and gravel in 1939.<sup>4</sup> This figure was used as the labor requirement for the transportation of 1 ton of cinders. Thus it was estimated that 4.6 man-hours were required to transport 7.6 tons of cinders to the plant. By use of basic plant data it was determined that 1.5 man-hours were needed to prepare the cinders at the plant after delivery, making a total of 6.1 man-hours for transportation and preparation of the 7.6 tons of cinders. Analysis of the data collected in this study shows that cinders were the aggregate used for 67 percent of the total production of lightweight blocks. Since no available data were found for estimating the man-hour requirements for other lightweight aggregates, labor requirements for the transportation and preparation of cinders, based on data collected in this survey, were used as representative of all lightweight aggregates.

The labor requirement estimate for lightweight aggregates appears to be understated in view of the fact that no allowance is made for labor expended in the production of raw cinders. It is not to be imputed that lower man-hour requirements for lightweight aggregates, as compared with total requirements for heavyweight aggregates, are indicative of lower costs for the lightweight block manufacturer. On the contrary, it has been noted in some areas that the cost of raw cinders (due, at least in part, to inadequate local supplies) exceeded the cost of prepared heavyweight aggregates. In addition, the cinder-

<sup>4</sup> See Labor Requirements in Production and Distribution of Sand and Gravel, in Monthly Labor Review, July 1939 (reprinted, with additional data, as Serial No. R. 944).



block manufacturer had to bear the cost of the extra operations in preparing the raw cinders for use.

#### MANUFACTURING—PLANT OPERATIONS

The 50 plants in this study represent a monthly rate of production of 8,674,284 lightweight and heavyweight concrete blocks of 8 x 8 x 16 inch equivalent size. Total man-hour requirements for this production and the man-hours per thousand blocks are shown below by plant operation:

	Man-hours required in manufacture of con- crete block, 1946 <sup>1</sup>	
	Total	To produce 1,000 blocks
Total, plant operations.....	262, 044	30. 2
Proportioning and mixing.....	20, 876	2. 4
Machine molding.....	46, 382	5. 3
Hauling.....	24, 872	2. 9
Yard.....	85, 958	9. 9
Maintenance.....	21, 377	2. 5
Superintendents and foremen.....	17, 704	2. 0
Miscellaneous labor.....	9, 114	1. 1
Administration.....	35, 761	4. 1

<sup>1</sup> Does not include man-hours required for preparation of aggregates or transportation of finished product.

The first operation is the proportioning and mixing of the aggregates and cement before the units are molded. In modern plants the materials are batched by measuring devices and placed into the concrete mixer.

Many aggregates, such as sand and gravel used for heavyweight block, and Haydite and Waylite for lightweight block, do not need additional preparation. They are delivered to the plant ready for use. Cinders, however, sometimes need preparation at the plant, such as crushing and removing foreign particles (metal, sulphur, etc.). For this reason, the man-hours for aggregate preparation are not shown separately above but are included in the raw materials section of the summary statement (see page 681).

The key operation in the plant is the machine molding operation. The machine forms the units, vibrates or tamps the concrete mixture, and discharges the formed units onto pallets which are lifted to racks by air hoists. Modern machines are almost fully automatic, so that usually only one worker is necessary to operate air hoists and to tend the machine as it is in production.

After the blocks have been molded on the machine and placed on racks, they are hauled by tractor or by hand to the curing rooms or kilns.

In any plant the largest single group of employees is the yard gang. This group numbered from 3 to 7 employees per plant. As concrete units are bulky and must be moved many times, considerable labor is

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expended in this operation. The yard employees remove the blocks from the curing rooms, stack them in the yard for stock piles or additional curing, sometimes assist with the loading of the finished blocks for shipment, and perform other unclassified tasks. The labor is generally unskilled and nearly a third of the entire plant employment is engaged in yard operations. For this operation a total of 85,958 man-hours was required, or an average of 9.9 man-hours per thousand blocks produced.

Maintenance includes the labor necessary to make repairs on machinery and plant equipment. During the period surveyed, plants were operating at a high rate of production and a considerable range in the man-hours required for this function was noted between plants having relatively new machinery and those where the machinery was older. This range was from 0.5 man-hour per thousand blocks produced in the newer, modern plants to 11.3 man-hours in the older plants.

Plant supervision functions are performed by superintendents and foremen. Administration includes the executive, clerical, and sales force. Miscellaneous labor includes watchmen, janitors, boilermen, etc.

#### TRANSPORTATION OF CONCRETE BLOCKS

High transportation costs limit the area which can be economically served by the concrete products manufacturer and for this reason plants are widely dispersed. Since they serve relatively small local areas, the shipment of the finished product is usually by motortruck. Most plants deliver varying proportions of their production and this function may be considered as a plant operation. In many plants surveyed, deliveries were made by trucking companies on a contract basis for all or part of the finished product. In addition, considerable proportions were transported from the plant by the purchaser. For the purpose of establishing a basis for comparison, the data for the transportation of concrete blocks to the construction site were not included in plant operations. From plant records it was found that the delivery of 3,244,000 blocks required 31,000 man-hours and it was estimated that 9.6 man-hours were required for the transportation of 1,000 blocks. The transportation of lightweight blocks required 9.2 man-hours for 1,000 units, whereas 10.0 man-hours were needed for heavyweight blocks.

#### VARIATIONS IN LABOR REQUIREMENTS

##### *By Monthly Rate of Production and Molding Machines in Use*

Among the significant factors in determining the number of man-hours required to produce 1,000 blocks, the monthly rate of production and the number of molding machines in the plants are taken into consideration. Table 1 shows that, in terms of total man-hours, plants

producing over 350,000 blocks were nearly 3 times as efficient as those producing less than 50,000 blocks monthly. The greatest variation appeared in the manufacturing process. The 9 plants producing less than 50,000 blocks required 27.8 man-hours per thousand as compared with 7.6 man-hours for the 5 plants which produced in excess of 350,000 blocks during the same period. The next greatest variation (24.1 man-hours compared with 6.7) occurred in the yard operation. Similarly, the man-hours required for the administrative function varied considerably—from 15.2 man-hours for the small to 3.0 man-hours for the large producers. The least variation was in overhead, with the smallest producers requiring 7.4 man-hours, and the largest 5.8 man-hours per thousand concrete blocks.

TABLE 1.—Average Number of Man-Hours Required To Produce 1,000 Concrete Blocks, 1946,<sup>1</sup> by Rate of Production

Monthly rate of production (8 x 8 x 16 equivalent units)	Number of plants	Man-hours per 1,000 blocks				
		Total	Manufac- turing	Yard	Over- head	Adminis- trative
All plants.....	50	30.2	10.6	9.9	5.6	4.1
Under 50,000 units.....	9	74.5	27.8	24.1	7.4	15.2
50,000-149,999 units.....	17	38.0	13.6	12.8	6.0	5.6
150,000-249,999 units.....	14	30.9	10.9	10.6	5.5	3.9
250,000-349,999 units.....	5	25.9	9.8	9.5	4.5	3.1
350,000 units and over.....	5	23.1	7.6	6.7	5.8	3.0

<sup>1</sup> Does not include man-hours required for preparation of aggregates or transportation of finished product.

**Molding machines.**—The most important producing unit in any plant is the molding machine, and the capacity of a plant is based on the number of machines in use. In this study important variations in man-hours were found to exist between plants having one, two, and three or more of these machines. Table 2 shows a break-down of man-hours required to produce 1,000 blocks for 45 plants, by number of machines. A significant difference in total man-hours required

TABLE 2.—Variation in Man-Hours Per 1,000 Blocks, 1946,<sup>1</sup> by Number of Molding Machines

Machines in use	Number of plants	Number of blocks produced	Man-hours per 1,000 blocks				
			Total	Manufacturing	Yard	Overhead	Administrative
All plants.....	45	7,723,000	28.7	10.7	9.5	4.7	3.8
1 molding machine.....	20	2,025,000	34.3	11.5	11.9	6.2	4.7
2 molding machines.....	19	3,836,000	27.5	10.3	8.7	4.4	4.1
3 or more molding machines.....	6	1,862,000	24.9	10.3	8.6	3.5	2.5

<sup>1</sup> Does not include man-hours required for preparation of aggregates or transportation of finished product.

existed in those plants having one machine as compared with plants having three or more machines. As table 2 indicates, the manufacturing operation showed the least variation because of the automatic features of most machines, while the yard and overhead functions showed the greatest variations.

It should be noted that during this period, 6 large plants, each with 3 or more machines, produced almost as many units as 20 plants with 1 machine.

*By Lightweight and Heavyweight Aggregates*

Concrete blocks are divided by the industry into two major classifications—lightweight and heavyweight. A lightweight block on the average will weigh about 30 pounds, while a heavyweight block will weigh approximately 40 pounds for the same size—8 x 8 x 16 inches. The range is from 27 to 33 pounds per block for the lightweight, and from 38 to 44 pounds for the heavyweight blocks.

In general, lightweight blocks are used for "back up" with other facing material, for partitions and general interior construction, while heavyweight blocks are used for foundations and load-bearing walls. However, even for exterior use, lightweight blocks are gaining increased popularity.

Table 3 shows the average number of man-hours required to produce 1,000 blocks by the two types of aggregates used. In general, 5 more man-hours per thousand blocks were required to produce lightweight block than heavyweight block. Many plants produced both types of blocks and it was necessary to obtain man-hour data for each type of block produced in each plant.

From information gained in the field, it has been determined that lightweight blocks require more care in manufacturing and handling throughout the plant. An additional worker or two were necessary for efficient production of these blocks.

TABLE 3.—Average Number of Man-Hours Required To Produce 1,000 Concrete Blocks, 1946,<sup>1</sup> by Type of Aggregates Used

Type of aggregates used	Number of plants	Man-hours per 1,000 blocks				
		Total	Manu- facturing	Yard	Overhead	Admin- istrative
All types.....	50	30.2	10.6	9.9	5.6	4.1
Lightweight.....	31	32.4	11.2	10.1	6.8	4.3
Heavyweight.....	32	27.4	10.0	9.6	3.9	3.9

<sup>1</sup> Does not include man-hours required for preparation of aggregates or transportation of finished product.



*Man-Hour Requirements for Concrete Pipe*

The analysis of 34 plants included in this study indicates that a total of 7.50 man-hours was required for the production of 1 ton of concrete pipe. It was estimated that 2.63 man-hours were required to extract, process, and deliver to the plant the necessary materials (including electric power) for the production of 1 ton of concrete pipe. Plant operations accounted for 4.40 man-hours per ton and the transportation of the finished product to the construction site required 0.47 man-hour. Estimated man-hour requirements, by operations, are presented in the following summary:

	<i>Man-hours per ton of concrete pipe</i>
Total, production and transportation.....	7.50
Raw materials, production and transportation.....	2.63
Manufacturing.....	4.40
Transportation, finished product.....	.47

Man-hour requirements in the production of 1 ton of pipe varied inversely with the monthly rate of production. Plants producing 500 tons or less per month required 6.48 man-hours per ton, while the labor requirements per ton in plants producing more than 1,400 tons per month were 3.93 man-hours. Variations were noted among geographic areas with requirements ranging from 4.00 man-hours for plants in the Pacific States to 6.16 man-hours for plants in the Northeast.

## PRODUCTION AND TRANSPORTATION OF RAW MATERIALS

The principal materials used in the manufacture of concrete pipe are (1) cement, (2) sand and gravel or crushed stone, and (3) reinforcing steel. Below are shown the materials, including electric power, and the man-hours required to produce the quantities consumed per ton of concrete pipe, for which data were estimated:

		<i>Requirements per ton</i>	
	<i>Amount of materials</i>		<i>Man-hours to produce quantities consumed<sup>1</sup></i>
Total, per ton.....			2.63
Cement.....	barrels.....	0.90	0.90
Sand and gravel.....	tons.....	.85	.80
Reinforcing steel.....	tons.....	.02	.91
Electric power.....	kw.-hr.....	6.03	.02

<sup>1</sup> Includes man-hour requirements for delivery to the plant.

On the basis of estimates developed in the previous section of this report on labor requirements in concrete-block production, the man-

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hours needed for the production and transportation of cement, sand and gravel, and electric power were determined.

An analysis, in 1935, of man-hours per unit of output in steel manufacture<sup>1</sup> did not prepare estimates for the manufacture of the type of steel used as reinforcing for pipe. However, in the absence of these data, the man-hour requirements for drawn wire were substituted. Thus, it was estimated that 0.91 man-hours were required to produce and transport the average quantity of reinforcing steel used in the manufacture of 1 ton of concrete pipe. It should be noted that the 0.02 ton of steel represents an average requirement per ton for the production of all plain and reinforced pipe included in this study, and that the labor requirements estimate does not include the fabrication of this material into the steel fabric used for reinforcing.

#### MANUFACTURING—PLANT OPERATIONS

Because the pipe plants included in the study manufactured a wide variety of sizes during the period surveyed, it was found feasible not to attempt to separate the manufacturing process in terms of man-hours for machine-molded and hand-cast pipe.

The following figures show the man-hours required to manufacture a ton of pipe, by plant operations. A total of 129,370 man-hours of labor was required to produce 29,402 tons of pipe, or 4.40 man-hours per ton.

	<i>Man-hour total</i>	<i>Requirements per ton</i>
Total (34 plants).....	129, 370	4. 40
Proportioning and mixing.....	12, 251	. 42
Cage welders.....	7, 484	. 25
Molding (machine and cast).....	13, 017	. 44
Trucking and stripping.....	17, 847	. 61
Yard.....	41, 201	1. 41
Maintenance.....	9, 783	. 33
Superintendent and foremen.....	8, 757	. 30
Miscellaneous labor.....	2, 492	. 08
Administrative.....	16, 538	. 56

The proportioning and mixing operation is very similar to that for heavyweight block. The construction of the steel reinforcing cage, around which the concrete is poured for the larger sizes of pipe, comprises the cage welding operation.

The molding operation includes pouring concrete into forms, and vibrating or tamping.

After the pipe is formed or molded, the next operation is stripping the unit from the mold. For machine-molded pipe, this is done by

<sup>1</sup> See Man-Hours of Labor per Unit of Output in Steel Manufacture, in Monthly Labor Review, May 1935.

mechanical strippers which remove the mold and allow the pipe to stand and harden. Then the unit is placed on carts or dollies and hauled to the curing rooms or kilns. In cast pipe the mold is removed by hand and made ready for wrapping and sprinkling.

Because pipe is bulky and heavy, considerable yard labor is necessary to move the pipe from the molding forms to curing places about the plant. After curing, the pipe is prepared for shipment. In cast pipe plants, yard men assist in stripping the mold and wrapping the pipe. This operation accounted for nearly a third of all labor in the plant and required a total of 41,201 man-hours, or 1.41 hours per ton of concrete pipe.

The overhead operations (maintenance, superintendents and foremen, and miscellaneous labor) and administrative labor are similar to those for block plants.

#### TRANSPORTATION OF CONCRETE PIPE

Conditions similar to those noted in the transportation of concrete block prevail in the delivery of concrete pipe to the construction site and for the same reasons, these data are not included in plant operations. Data for plants which delivered their product show that the transportation of 17,333 tons of concrete pipe required 8,071 man-hours, an average of 0.47 man-hour per ton.

#### VARIATIONS IN LABOR REQUIREMENTS

##### *By Monthly Rate of Production*

Table 4 indicates the variations in man-hours per ton of pipe production on a monthly tonnage basis of 29 plants included in the survey. Considerable variation was noted between those plants which produced 1,400 tons and over (3.93 man-hours for each ton of pipe produced), and those producing less than 500 tons per month (6.48 man-hours). The total man-hours are divided between manufacturing, yard, overhead, and administrative operations.

**TABLE 4.—Average Number of Man-Hours Required to Produce 1 Ton of Concrete Pipe,<sup>1</sup> 1946, by Rate of Production**

Rate of production	Number of plants	Man-hours per ton				
		Total	Manufacturing	Yard	Overhead	Administrative
All plants.....	29	4.55	1.73	1.50	0.73	0.59
Under 500 tons.....	8	6.48	2.18	2.22	.87	1.21
500-799 tons.....	8	4.77	1.82	1.35	.90	.70
800-1,099 tons.....	5	4.34	1.93	.95	.85	.61
1,100-1,399 tons.....	5	4.24	1.57	1.62	.63	.42
1,400 tons and over.....	3	3.93	1.40	1.72	.47	.34

<sup>1</sup> Does not include transportation of finished product.

*By Geographic Areas*

Variations in labor requirements per ton of pipe by geographic areas are given in table 5. Total man-hour requirements per ton range from 4.00 for Pacific plants to 6.16 for the Northeast. It is not to be concluded that these variations assume significance because of the geographic location of the plants. The comparatively high averages shown for the Northeast appear to be largely due to the low percentage of capacity utilization in the plants of that area. This factor is significantly reflected in the man-hour requirements for the overhead and administrative functions. It should be noted that the plants, in the areas showing man-hour requirements below the average for all plants, were producing larger proportions of pipe in the smaller sizes, which permitted the use of pipe molding machines and did not require the extra employment for welding and placing the reinforcing steel necessary in the production of larger sizes. It can be observed that the average requirements for all areas except the Northeast, representing 31 of the 34 plants, are within the relatively narrow range from 4.00 to 4.74 man-hours per ton.

TABLE 5.—*Average Number of Man-Hours Required to Produce 1 Ton of Concrete Pipe,<sup>1</sup> 1946, by Geographic Division*

Area	Number of plants	Man-hours per ton				
		Total	Manufacturing	Yard	Overhead	Administrative
All plants.....	34	4.40	1.72	1.41	0.71	0.56
Pacific.....	6	4.00	2.13	.68	.75	.44
East North Central.....	10	4.01	1.40	1.44	.61	.56
Middle Atlantic.....	8	4.20	1.12	1.91	.51	.66
West North Central.....	3	4.34	1.81	1.35	.79	.39
South.....	4	4.74	2.30	1.29	.72	.43
Northeast.....	3	6.16	2.56	1.34	1.39	.87

<sup>1</sup> Does not include transportation of finished product.



## Labor Participation in Industrial Management in European Countries<sup>1</sup>

THROUGHOUT Europe today, labor is seeking broader participation in the management of industry. Such a movement began in several countries during World War I and was accentuated by the political developments in central and eastern Europe at its close. The Whitley councils in Great Britain and the works-council legislation of Austria, Germany, and Czechoslovakia belong to this period. Industrial and works councils were frequently effective in bettering employment conditions and promoting welfare measures, but their activities in the field of production remained extremely limited. Even their limited activities were so clearly opposed to the ideologies of nazism and fascism that they were immediately suspended in countries where regimes of this type arose.

At present, increased participation by labor in the management of industry is favored by a combination of economic and political factors. Realization is growing in Europe that the enormous task of reconstruction can be accomplished only by the coordinated efforts of all productive forces. Labor, moreover, has gained in status and influence in many countries by its contribution to the war effort and to the underground resistance. Therefore, labor's demands for participation in the management of industry meet with success not only in countries which moved in this direction after the First World War—such as Great Britain, Czechoslovakia, Austria, and Germany—but also in countries which then kept aloof from such developments. The following survey gives evidence of this expansion in Sweden, Norway, France, Italy, Finland, Poland, and Hungary. In some other European countries—such as the Netherlands, Belgium, and Denmark—similar measures are under discussion, but are not sufficiently advanced to be included in this article.

In each of the countries covered, labor is authorized to participate in some way in the management of individual enterprises. For Great Britain, France, and parts of Germany such participation is reported also as concerning whole industries. The main means of labor participation within the individual enterprise is, in all countries, a body elected by all employees of the enterprise, usually called works council, but also works, factory, or production committee. In France, Sweden, Norway, and Finland, and predominantly also in Great Britain and Italy, these bodies are composed of both employer and em-

<sup>1</sup> Prepared by Oscar Welgert and other members of the Staff on Foreign Labor Conditions under the direction of Faith M. Williams. The materials for this report were taken from official and other publications of the countries covered and from reports of the U. S. Foreign Service.



ployee representatives; in the eastern European countries and in Austria and Germany, management is not represented in the councils but is expected to cooperate with them. France and Norway, and in some cases also Great Britain, provide for a representation of foremen and other technical employees within the council.

Trade-unions and works councils are everywhere closely coordinated. Earlier rivalry between unions and councils has largely disappeared and the dominance of the unions seems clearly established.

In all countries studied, works councils have additional functions, such as dealing with working conditions, terms of employment, or the social welfare of employees, varying in extent and character from country to country. These functions are described here only as they are incidental to the general discussion.

The basis of labor participation is either a voluntary agreement between management and organized labor or a legislative requirement. Great Britain, Norway, and Sweden use the voluntary method while a majority of the countries on the European Continent require labor participation in industrial management. The various countries are here grouped according to their approach to this subject.

The scope and degree of labor participation in the management of individual establishments vary considerably from country to country, reflecting in part political differences. In some countries, labor participation is limited to certain aspects of the production process. In others, it extends to many phases of industrial management, including decisions on production programs, pricing policies, and sometimes even sales policies. The degree of authority assigned to the labor groups varies from consultation and suggestion to day-to-day checks on managerial activities, and even to full participation in business planning and operation.

It is generally recognized that, in the period between the two wars, labor participation in management was of rather limited practical value, mainly because of labor's lack of experience in this field, and sometimes also lack of interest, and because of a hostile attitude on the part of management. It is impossible at the present time to forecast the final form and the results of the new developments. Most of the laws and institutions herein reviewed are of recent origin and are still to be tested by practical experience.

### *Labor Participation on a Voluntary Basis*

#### GREAT BRITAIN

Labor's assumption of a responsible advisory role in industrial problems in Great Britain has developed gradually, resulting from the impact of economic forces and the strains of two wars, as much

as from the rise to power of the Labor Party. Management has exhibited both a reluctance to share its prerogatives and a fear of socialization, and the unions have at times hesitated to assume new responsibilities. But both sides have, to an increasing degree, shown a practical ability to cooperate on vital matters of mutual concern.

Prior to World War II, numerous works committees operated within individual enterprises, some of them joint committees, and others composed of workers' representatives only. Such committees were mainly concerned with grievances, application of union agreements, safety, and welfare.

During World War II, joint committees for the purpose of increasing production were formed in many war plants, shipyards, coal mines, and at large-scale construction sites, under national agreements signed in the engineering (metal-fabricating), shipbuilding, coal-mining, and construction industries. Technicians sat sometimes on the management, and sometimes on the labor side. Labor representatives, while elected by the entire plant voting by departments or sections, were always trade-unionists. The employers opposed requests by the unions to make the formation of such committees mandatory.

The joint production committees dealt with recommendations and suggestions for achieving fuller utilization of plant and machinery, elimination of bottlenecks in production, welfare arrangements, transportation facilities, and absenteeism. More than 5,000 joint production committees functioned, before the war ended, in establishments employing more than 3.5 million workers.

Since VJ-day, the importance of the committees has diminished. However, their retention and development have been urged by the Labor Party, the Trades Union Congress, and the Minister of Labor. A revision of the agreement setting up committees in the engineering trades was under way in the summer of 1946.

During World War II, a national production advisory council and regional production boards, composed of Government officials and trade-union and employer representatives, dealt with current problems in the allocation of supplies, utilization of plant, machinery, and manpower, the distribution of contracts, and other matters.

At the present time, nearly 100 joint industrial councils,<sup>2</sup> composed of representatives of unions and employers' federations, function at either the national or district level. Forty were organized after the war started. Approximately 5 million workers are covered by the councils. The number of representatives composing the councils varies from a dozen to 70, with a liaison officer of the Ministry of Labor often attending the meetings (which occur usually at regular intervals).

<sup>2</sup> The origin of these councils was the Whitley Committee Reports 1918-1919. See Joint Industrial Councils in Great Britain, in *Monthly Labor Review*, May 1939, p. 1046 (reprinted as Serial No. R. 932).

Certain of the joint industrial councils have from time to time discussed production and trade problems. For example, the Pottery Council made recommendations on methods of saving fuel and securing cheaper power; the Printing and Allied Trades Council, through its betterment committee, has investigated efficiency, time-saving machinery, cost-accounting systems, standardization of products, and methods of reducing seasonal business fluctuations. Several councils have considered commercial legislation affecting their trades, as well as research and technical training and postwar industrial problems.

Joint production councils at the national, regional, and site levels were appointed early in 1946 to expedite the housing program in cooperation with the Ministry of Works and with local authorities. Twenty-five paid regional production officers were to be appointed in a drive to maximize output of dwellings. They are to report to the joint secretaries of the national council in the building industry.

Notable examples of labor participation in the constructive analysis of management problems (at the industry level) are the working parties, 15 of which were appointed by the president of the Board of Trade following VJ-day, to report upon the problems of industries which the Labor Government did not intend to nationalize. In the case of textiles, this was preceded by an elaborate survey of the industry made by the textile unions.<sup>3</sup>

The first three working party reports to be issued (cotton, pottery, and boots and shoes) recommended tripartite boards similar to the working parties themselves, composed of union and employer representatives and technical experts, to review the problems of the respective industries and to make recommendations to managements and to Government. The cotton party majority report, signed by the impartial chairman, one employer, and the trade-union representatives, made further sweeping recommendations for improving the efficiency and competitive ability of the industry by amalgamations, reorganization, reequipment, elimination of obsolete or redundant facilities, and, if necessary, the use of compulsory powers. The cotton party also recommended, unanimously, the operation of experimental mills by the industry, with union representation on the directing boards.

The fact that no provision has been made for representation of trade-unions as such on the governing boards of nationalized industries has been criticized by left-wing groups. However, experienced trade-union leaders have been appointed to the governing boards of the Bank of England (1 out of 16) and of the coal industry (2 out of 9). The iron and steel unions have demanded that they be consulted on

<sup>3</sup> United Textile Factory Workers' Association. Report of the Legislative Council on Ways and Means of Improving the Economic Stability of the Cotton Textile Industry. Rochdale, England, 1943.



the plans for nationalization in that industry, since they believe that they have something to offer in improving the organization and efficiency of the industry.

#### SWEDEN

In Sweden, joint production committees of labor and employer representatives were introduced in May 1945 in armament enterprises employing 75 or more workers, by an agreement between employer and worker organizations. The agreement is to remain in effect through March 1947 and may be extended for a longer time. The committees deal, as advisory organs, with workers' suggestions for the improvement of production methods and of the quality of products; they deal also with conditions of work not regulated by collective agreement. Before questions are referred to the joint committee, they are considered by the two sides meeting separately. The manager of the enterprise is chairman of the joint committee, but is not a member. Meetings are held once in every calendar quarter, and at the discretion of the chairman.

In June 1946, a preliminary agreement between the Swedish Confederation of Labor and the Employers' Association (ratified by labor but not yet by the employers) provided for the establishment of production committees composed of employer and worker representatives in enterprises employing more than 25 workers (wherever requested by the employer or the workers) and for production representatives in smaller organizations. The committees are to function as organs for information and joint deliberation, and are to make it possible for the employees to acquire insight into the economic and technical conditions as well as the results of the enterprise. They are also to supervise the occupational training conducted by the enterprise and to promote the welfare of the workers.

#### NORWAY

In Norway, an agreement of December 1945 between the Norwegian Employers' Association and the National Federation of Trade Unions provided for the establishment of joint production committees in all industrial and handicraft enterprises, with 20 or more workers or their equivalent in man-hours in the previous year. In smaller enterprises, such committees may be formed at the request of the employer or a majority of the workers.

Under this agreement, management and labor are allowed equal representation on the committees. One of the worker representatives must be the shop steward of the union; if there is more than one worker representative, the technical and office employees must be represented separately from production workers. The management representatives must have positions of authority and a good knowledge



of operations. Committee chairman and secretary are selected alternately by the management and worker representatives, one for each group. Meetings are held monthly or at the request of either of the groups.

The committees are to receive quarterly reports from management on the status of production, the sales position, and the general economic situation of the respective enterprises, and are to function as advisory bodies in matters concerning production. They are not allowed to discuss questions involving wages and hours, which remain subject to collective bargaining.

The work of the individual committees is to be assisted by a National Advisory Committee, composed of two representatives each from the Norwegian Employers' Association and the National Federation of Trade Unions. To facilitate further the work of the production committees, the Norwegian Federation of Trade Unions established a committee to supervise the training of worker representatives participating in the program.

### *Labor Participation in Management Required by Law*

#### FRANCE

The workers' prominent part in the resistance movement and their acceptance of managerial responsibilities as liberation progressed assisted organized labor in France in winning legal status for the works committee—an institution which it had long advocated in one form or another—and in increasing labor's influence in industrial groups of national scope.

Immediately upon liberation, works committees (*comités d'entreprise*) were spontaneously created in many plants. In the sequestered Berliet enterprise at Venissieux-Lyon (Rhône), management was replaced by a tripartite administrative council. Works committees with advisory functions were installed in the individual establishments. In the coal fields of northern France and in the Renault automobile factories, which were nationalized by orders of December 1944 and January 1945, respectively, similar works committees were created.

Meanwhile in 1944, the French Committee of National Liberation had required the establishment of joint production committees (*comités mixtes à la production*) in the industrial enterprises of the Air Department, and the Provisional Government had submitted to the Provisional Consultative Assembly an ordinance making the creation of works committees mandatory.

When finally enacted on February 22, 1945, the terms of the ordinance were applicable to commercial and industrial enterprises in

continental France which employed 100 or more workers, and could be extended by decree to smaller enterprises.<sup>4</sup> By an amendment of May 16, 1946, this legislation was permanently extended to Government offices, the liberal professions, incorporated societies, and associations of any character in France and the departments of France overseas which employed as few as 50 workers.<sup>5</sup> The committees are to consist of the employer or his representative and from 2 to 8 workers representing foremen or engineers and employees separately, who must be selected by secret ballot from nominations submitted by the most representative labor organizations.<sup>6</sup>

The committees were originally given (1) authority to manage or assist in the management of welfare activities and to cooperate in the improvement of working conditions; (2) consultative powers in certain economic matters, including the study of workers' suggestions on production methods; and (3) the right to be informed from reports which management was required to present on the organization, management, and financial condition of the enterprise. The amending legislation of May 1946 authorized the committees to give advice on price increases and to be consulted as well as informed on the management and general condition of the enterprise. If the committee's recommendations were disregarded, they might be submitted to the general Inspectorate of Industrial Production, a governmental agency. In certain companies (*sociétés anonymes*) management was required to present statements of profits and losses and auditors' reports to the works committee before presentation of such statements to the shareholders' assembly, and the committees were authorized to use the services of an expert accountant and convoke the company auditors. The law of May 16 permitted each trade-union recognized as representative in the enterprise to name a delegate with consultative vote to attend committee meetings.

During the first year's operation under the ordinance of February 22, 1945, 4,039 works committees were created out of a possible total of 5,067. Their accomplishments were greatest in the field of social welfare. In the economic field, most interest was shown in worker participation in production matters. Lack of supplies was considered a serious obstacle by management. However, committee proposals were adopted for improving techniques, machinery, and shops in the mining, textile, and other industries, and for schemes of apprentice

<sup>4</sup> Decrees extending the legislation included those for mutual insurance associations (August 24, 1945); wood industry (January 11, 1946); chemical and metallurgical (February 1, 1946).

<sup>5</sup> Calculating on the basis of the last census (1936), 15,705 establishments with 50 or more workers each, employing a total of 3,192,434 wage earners, would be subject to this law. Current data on the number of establishments in France are not available.

<sup>6</sup> For further details, see Monthly Labor Review, July 1945 (p. 92).

training. Since lack of experience limited the workers' contribution to the committees, the General Confederation of Labor undertook the training of representatives on the works committees.

In industries which have been permanently taken over by the Government, the principles of labor participation were applied on a nation-wide basis.

The president of the National Coalfields in Northern France is to be assisted by an advisory council consisting of nine representatives of the State, two of the former owner-companies, five of the coal-consuming industries, and eight of the various categories of workers. This council must be consulted on plans for long-term loans and for new establishments, and must be informed regarding the operation of the industry and its financial position. The organization was continued provisionally by the law of May 18, 1946, which nationalized all the "combustible mineral" mines of France. This law created a central administrative body, the Charbonnages of France, with a tripartite administrative council of 18 members representing the State, the industrial and domestic consumers, and the personnel (including foremen and engineers). The Charbonnages is authorized to make plans for output and equipment, price recommendations, the repayment of loans, and similar matters.

Legislation of December 2, 1945, on the nationalization of credit also required that administrative bodies (the Board of Directors and the National Council of Credit) contain representatives of bank personnel and the leading trade-unions. Similarly, the law of April 8, 1946, nationalizing the gas and electricity industries, provided for administrative councils to consist of representatives of the State, the consumers, and personnel; and the law of April 25, 1946, nationalizing certain insurance associations, provided for a National Insurance Council and other councils of representatives of the State, the insured, and personnel.

Labor and management in various industries were represented in the trade sections attached to the National Economic Council as early as 1925. Industry committees with labor representation which have been established since liberation include (a) committees composed of representatives of employers', technicians', and workers' organizations, authorized by decree of November 30, 1945, and created by later decrees, to advise the industry bureaus of the Ministry of Industrial Production; and (b) commissions on the coal, building materials, and other industries, which were appointed to prepare industry-wide programs for the Planning Council on the Modernization of French Industry (appointed in January 1946).



## ITALY

As the German-supported regime in northern Italy began to collapse, the workers who belonged to the National Committee for Liberation installed works committees to take over management functions in different industries. At the same time, labor was given nonvoting membership in the administrative committees of some enterprises taken over by the new Italian Government in the south. Precedents for labor-management collaboration in industry existed in Italy in works committees of the automobile and other industries between 1906 and the rise of fascism. They were continued and implemented by a decree of the Fascist regime (February 12, 1944) which required wide-scale transformation of boards of directors into representative committees of shareholders and workers.

By the spring of 1946, committees representing labor and management in consultative functions were reported in about 500 enterprises. In the Finsider holding company, workers had nonvoting membership in the board of directors. The Fiat company agreed in February 1946, to consult workers' committees (*comitati consultivi gestionali*) to be formed in all Fiat plants. According to the terms of the agreement, consultation and information should concern mainly (a) the improvement of production and of the means of production (aiming at the increase of productive efficiency); (b) labor-saving appliances or innovations (methods intended to reduce costs of productions); (c) general plans, production plans, and ways of carrying them out (estimated budgets and final balances); and (d) improvement of working and living conditions.

Organized labor campaigned during 1945 for legal recognition of some form of factory committees with managerial functions. In July 1946, a bill was under consideration which would require factory committees resembling those established by the Fiat agreement.

## FINLAND

In Finland, a law of June 21, 1946, effective since September 1, 1946, requires the establishment of production committees, composed of employee and employer representatives, in establishments having employees working 120,000 man-hours annually (excluding overtime). In smaller plants, such committees may be established by agreement between the employer and the majority of employees.

Part of the functions of the production committees concern labor relations and employment conditions; the committees also are to examine methods of increasing production and to help in controlling the use of fuel and raw materials and the distribution of products. The activities of the committees are to be supervised by the Ministry for Social Affairs in which a central advisory committee composed of

employee, employer, and farm representatives (appointed by the Cabinet) is to function.

#### POLAND, CZECHOSLOVAKIA, AND HUNGARY

Czechoslovakian legislation of 1920 and 1921 provided for establishment of works councils in the mining industry and of works committees in all other industrial and commercial enterprises. Their chief function was to represent worker interests. Employers, however, were compelled to inform the councils and committees regularly about the economic and financial conditions of the establishment. Workers' representatives of the larger companies were entitled to send permanent delegates to the company's board of directors. District works councils in the mining industry had a voice in determining prices and in distribution. It may be assumed that all these bodies stopped functioning under the Nazi domination.

As the Germans retreated from Poland, Czechoslovakia, and Hungary, the employees created works councils in many enterprises spontaneously. For a limited time, these councils took over the full responsibility for repairing, supplying, and operating factories. After regular managerial machinery was reestablished, many councils continued, though with more limited functions.

These developments were formalized by Government decrees, issued in Poland and Hungary in February, and in Czechoslovakia in October 1945. The decrees provided for works councils representing labor exclusively and ranging in size from 3 to 30 members, depending upon the number of employees in each enterprise. The councils or their representatives meet regularly with management and their duties are not only to represent the interests of the workers but also to assist management in increasing and improving production.

The coverage under the Czechoslovakian decree is broader than that in the other two countries. According to its terms, the works councils in Czechoslovakia are "to control activities of the works in the interest of the community, and to take part in management in an advisory capacity." The Government may assign further tasks to the works councils. The chairman of the Central Council of Czechoslovak Trade Unions, in an article written for the Soviet Labor Daily *Trud* (July 10, 1946), stated that representatives of works councils participate in the meetings of directors of nationalized enterprises, and that works councils in other enterprises have a voice in the hiring, allocation, and dismissal of workers, and also in the distribution of profits.

According to the Polish decree, the works councils should collaborate "with State organs or national councils in the control of the economic activity of the establishment to the benefit of society." This decree

also provides that they should confer with management, at least once a month, concerning improvement of production and workers' welfare. The council should appoint one of its members to the managing body where this body consists of several persons. The council is, on the other hand, forbidden to take independent action in the management of the establishment; its decisions and recommendations must always be submitted to management for execution. This also applies to the Czechoslovakian councils.

Under the Hungarian decree, the works council of each plant, in order to cooperate in the promotion of better and more efficient production, holds a conference with management at least once every 2 months. In all plants a conference of works managers must be held at least once every 2 weeks, with representatives of the works councils present. When proposals affecting production, made by a works council, are not accepted by management, the council, in agreement with the trade-union concerned, has the right of appeal to the National Council of Industry. Decision in the last resort lies with the Minister of Industry.

In all three countries, management is obliged by statute to make periodic reports to the appropriate works council on the economic situation of the enterprise (once a month in Czechoslovakia and once every 3 months in the other two countries).

#### AUSTRIA

Austria was the first country in Europe to establish works councils by statute (1919); and, although councils were not assigned production responsibilities, management was obliged to confer at least once a month with the council on the financial and economic conditions of the establishment. In all industrial and mining enterprises, and in commercial enterprises with not less than 300 employees, employers were required to present their yearly balance sheets to the councils. In joint stock companies, the councils were entitled to send representatives with full voting rights to the board of directors.

According to reliable reports, the practical importance of these provisions was very limited. The law was suspended under the Nazi regime. At the time of the Nazi collapse, works councils were formed spontaneously in Austria as in certain other liberated countries. Their legal status was based on the old law of the Republic. A works council law has been under discussion for some time. It is an important part of Austrian labor's program to revise the old law and to extend the functions of the councils.

In establishments from which managers fled or were removed for political reasons, the works councils in practice assumed a share in managerial functions in conjunction with appointed public trustees.

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In enterprises taken over by the Soviet Occupation Authorities, a similar practice has been followed.

Legislation on nationalization, which passed the Austrian Parliament on July 26, 1946, and came into force on September 17, 1946, gives representation on the managerial boards of nationalized industries to works councils and trade-unions. In addition, in certain enterprises that are to be nationalized, a profit-sharing arrangement was created by a law on works' cooperatives whereby a proportion of the capital shares of the former company is transferred to a workers' cooperative (including salaried employees) which will also share in the management of the enterprise.

#### GERMANY

The factors behind the all-European trend toward labor participation in management are particularly strong in occupied Germany. In addition to the tasks she has in common with other European countries, Germany is confronted with special problems such as demilitarization, reparation, and a thoroughgoing economic reorientation as outlined in recent inter-Allied agreements.<sup>7</sup> All these problems can be solved only by the participation of organized labor, which has been recognized as the most dependable and democratic group in present-day Germany.

Labor participation in production matters was the law of the land in republican Germany. The Weimar Constitution of August 1919 established the principle that German labor should participate, on an equal footing with management, in the regulation of wages and of employment conditions and also "in the total economic development of the productive forces" of the country. Actual accomplishments did not fulfill this provision. In a limited number of cartellized industries, organized labor was represented on semipublic policy-making boards. More important was the mandatory establishment of works councils in all major enterprises, including those in agriculture. According to the republican legislation, these councils were to safeguard the interests of the employees, by whom they were elected, and to "assist the employer in carrying out the economic aims of the enterprise." They were entitled to receive extensive information on business matters and were represented with voting rights on the supervisory boards of corporations.<sup>8</sup>

All these laws were canceled and all these institutions were abolished by the Nazis. After the German defeat in 1945, works councils reappeared spontaneously in all parts of Germany. Law No. 22

<sup>7</sup> See Future Levels of German Industrial Employment, in *Monthly Labor Review*, June 1946 (p. 895).

<sup>8</sup> For details see Bureau of Labor Statistics Bulletin 383: *Works Council Movement in Germany*, by Boris Stern. Washington, 1925. The bulletin discusses also the works council legislation in Austria, Czechoslovakia, and Norway.

of the Allied Control Council of April 10, 1946, mentions as one of their "basic functions . . . submission of proposals to the employer for the improvement of methods of work and organization of production for the purpose of avoiding unemployment." While the employer is obliged to submit periodically to the works council all necessary information, special agreements are required between each council and employer to define the contents of such reports. These agreements may also provide for the attendance of council members at meetings of the supervisory body of the enterprise, though only "as a matter of information" and without the voting rights which these representatives had under the republican law.

The Allied law superseded a decree issued in October 1945 in Thuringia, one of the Provinces of the Soviet Zone, which gave the works councils broader functions and rights in management matters than they had even in pre-Nazi Germany. The Allied law also failed to satisfy the demand for full participation (*volles Mitbestimmungsrecht*) in economic matters raised by trade-unions and works councils in the west and the east of the Reich. An official American interpretation suggests that agreements between councils and employers could be used to establish broader labor participation. The same procedure is recommended by the unions in the British and the Soviet Zones.

Only scanty information is available as to the share which labor actually has in economic matters in Germany. In western Germany, this participation is still largely limited to labor demands and statements by the authorities in regard to future programs. However, unions and councils are consulted by Occupation Authorities and German Government agencies in matters such as price control, rehabilitation of industry, and the elimination of cartels and monopolies.

In the Ruhr, works councils have a voice in the actual operation of the mines. An advisory committee has been established for each coal district, consisting of mining engineers, representatives of organized labor, and a public official. For iron and steel and for the light metal industries, so-called economic offices (*Wirtschaftsaemter*) were reported as created in the British Zone as semipublic agencies charged with economic planning and composed of equal numbers of labor and management representatives. Similar "offices" seem to be planned for other industries. Information is lacking about the way in which these agencies actually operate.

In the Soviet Zone, unions and works councils are closely associated with German economic offices, on the local as well as on the provincial level. Within individual enterprises, works councils representing all employees and works committees of the labor union work with

management on every aspect of production. Their actual influence and the degree of initiative allowed to them cannot be evaluated. Their status varies among the three types of establishments (enterprises appropriated by and operated by the Military Administration; nationalized enterprises; and enterprises in private ownership) which now exist side by side in the Soviet Zone. For the nationalized enterprises, it has been stressed in an authoritative statement that the appointed manager should not be hampered by direct intervention from unions or works councils. Labor is represented on the board of directors, and in addition the works council of such an enterprise also has supervisory functions. These functions extend to production matters proper and include sales policies and the determination of prices.



## Postwar Adjustment of Aircraft Workers in Southern California<sup>1</sup>

AT THE end of World War II, the future of southern California aircraft workers became the subject of great speculation in the press, in group deliberations, and in ordinary sidewalk conversations. Some citizens pictured an eastbound parade of weary aircraft workers in their jalopies, leaving behind depressed and deflated communities. Others anticipated an aircraft industry that would continue to work at top speed to satisfy the demands of an air-minded public for family and commercial planes of all kinds and sizes. The aircraft workers would, of course, remain and be better off than ever before.

In the midst of such discussion, the reconversion adjustments following VJ-day commenced. Reports from 287 of the 299 southern California aircraft workers, whose wartime experiences were observed by the Bureau of Labor Statistics, provide the basis for an analysis of postwar adjustments between VJ-day and June 1946.<sup>2</sup> Although reconversion is by no means completed, the predictions of neither extreme optimists nor pessimists seem to be confirmed. In the beginning of 1946, approximately 20 percent of this group of workers were jobless; by June, the unemployment rate had declined to about 12 percent, which was still considerably above that for the total civilian labor force in the country.

### *Employment Situation*

Slightly more than one out of every four of the aircraft workers in the group were still employed in the same company in the first part of 1946 as in the spring of 1945. Of those who found jobs elsewhere, a few transferred to other aircraft firms. With these workers, the total number who remained in the aircraft industry amounted to approximately 30 percent of all workers in the survey; by June 1946 this group declined to approximately 26 percent (table 1).

In view of the changes in production methods, with greater em-

<sup>1</sup> Prepared by L. R. Linsenmayer, Regional Wage Analyst of the Bureau's San Francisco office and Paul E. Warwick of the Los Angeles office. For a more detailed account of the prewar, wartime, and postwar record of these workers, see mimeographed report on *Work and Wage Experiences of Aircraft Workers in southern California*, available upon request from the Bureau's Wage Analysis Branch, Washington.

<sup>2</sup> The sample though limited, is representative of the workers in the southern California aircraft industry. The determining characteristics in selecting the sample were sex, color, occupation and grade, shift worked, and union affiliation. The number of workers allocated for selection from each plant was based on the proportion of the employees for each plant to the total employment of the industry.

The sample included 190 men and 109 women, the latter comprising 37 percent of the total of 299 workers. Sixteen, or about 5 percent, of the 299 workers, were Negroes. Approximately 59 percent of the workers were union members at the time of the survey. Eighty different occupations or grades were represented. About two-thirds of the men were in skilled jobs, while only one-fourth of the women were assigned to skilled tasks.

The selected workers were visited at their homes by field representatives of the Bureau who explained the purpose of the study and obtained information on the occupational history of the workers together with other pertinent data. Further data were obtained periodically by mail and personal visit.

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phasis on skilled workers and all-round mechanics, it is not surprising that men fared better than women in retention of aircraft jobs. In June 1946, a third of the men, but only 14 percent of the women, were so employed. In the spring of 1945, many of the older workers feared that the younger persons would "get the breaks." In this industry, these fears proved groundless as both men and women 45 years of age and over held their jobs in about the same proportion as younger persons. The older workers' fears were somewhat justified when they were confronted with the problem of finding new jobs. Over a fourth of all the workers were employed in other plants during the first part of 1946. By summer, this proportion increased to a third. However, only 25 percent of all workers 45 years of age and over found work with different companies. Confining the comparison solely to the group who left the aircraft industry, 31 percent of the older workers found other jobs as compared with 51 percent of those under 45.

TABLE 1.—*Employment Status of 287 Aircraft Workers in Southern California, Winter and June 1946*

Employment status	Percentage distribution of—					
	All workers		Men		Women	
	Winter 1946	June 1946	Winter 1946	June 1946	Winter 1946	June 1946
Employed in aircraft industry	30	26	35	34	19	14
Employed in other industries	26	34	33	39	15	25
Self-employed	7	10	10	15	—	1
Unemployed and seeking work	20	12	13	9	34	17
Not seeking work	11	17	1	2	30	43
Armed services	3	1	5	1	—	—
Not reported	3	—	3	—	2	—
Total	100	100	100	100	100	100

In the early months of 1946, the unemployed were 20 percent of all the workers surveyed, including about a third of the women but only an eighth of the men. By June 1946, total unemployment had dropped to 12 percent, including 17 percent of the women and 9 percent of the men.

Among the unemployed men, there were about the same number of older as younger workers, although in the total sample the younger men outnumbered the older by 3 to 1. Among the unemployed women, there were more younger women than older ones, by almost 2 to 1. However, in the entire sample, there were almost three times as many younger as older women. On the whole, the older workers appeared to be at no disadvantage in retaining their aircraft jobs, but those obliged to seek other means of livelihood were definitely handicapped compared with the younger group.

The 20 percent of all workers who were involuntarily unemployed in early 1946 and the 12 percent in June 1946 were a smaller proportion

of the total than those who were jobless and seeking work at some time between the spring of 1945 and the end of the year—40 percent. A third (35 percent) of the unemployed had been out of work from 13 to 16 weeks by the end of November 1945, almost half for less than 13 weeks and the remaining 15 percent for more than 16 weeks.

About two-thirds of all workers unemployed at any time had applied for and received unemployment compensation for specified periods, as indicated by the following figures:

Number of weeks' benefits:	Percent of unemployed workers
1-4 weeks.....	17
5-8 weeks.....	10
9-12 weeks.....	24
13-16 weeks.....	13
17-20 weeks.....	1
21-24 weeks.....	2
None.....	33
Total.....	100

#### WITHDRAWALS FROM THE LABOR MARKET

Workers who withdrew from the labor market included housewives, students, previously retired elderly people, and others who just wanted to rest for a while. Many had been contemplating this action for some time, but stayed on the job for a variety of reasons. Most of them expressed satisfaction with their new life, but looked back at their aircraft work as an interesting and exciting experience. Mrs. D. L., now 53, feels that she is too old to find a good job and plans to keep house and to travel with her husband, who is a salesman. Mrs. F. M., whose husband is a partner in a prospering business, had been an engine-lathe operator "to help the war effort" and was pleased to return to her household responsibilities.

The relatively few men who had left the labor market were either students or retired elderly men. For Mr. W., this was his second retirement. In 1930, he ended a successful career as the proprietor of a mortuary. Twelve years later he responded to the appeal to "aid the war effort" and was hired as a drill-press operator. After learning to read blue prints, he was advanced to milling-machine operator in March 1945. When interviewed in the spring of that year, Mr. W. said that after the war he would retire again and "do some writing." According to his report, his intentions were carried out.

Voluntary labor-market withdrawals are summarized below by current status of workers.

	Winter 1946		June 1946	
	Number	Percent	Number	Percent
Housewives.....	24	73	36	84
Retired elderly people.....	1	3	3	7
Students.....	2	6	1	2
Other.....	6	18	3	7
Total.....	33	100	43	100



## SHIFTS TO OTHER INDUSTRIES

Workers who found jobs after leaving the aircraft industry entered agriculture, other types of manufacturing, wholesale and retail trade, transportation, finance, services, and government. Surprisingly, only a negligible number returned to their prewar industries; most workers, both men and women, sought new occupations in new fields. For example, less than a third of the men and very few women, who were clerks in stores or employees of wholesale firms before the war, returned to those or similar jobs. Only in a few instances was the former job sufficiently attractive to induce workers to return after their experience in aircraft production.

Typical of those who had transferred to completely unrelated activities was Mr. L., who had been an aircraft assembler. After a brief period of unemployment, he found a job as a maintenance mechanic in a bakery. After 4 months he left because of "difficult working conditions" and was unemployed for a brief period. By late spring 1946, he had become an ambulance driver.

A veteran of World War II had returned to his old job as power-brake operator after a brief period in the Army. When first interviewed in the spring of 1945, he expressed a desire to retain his aircraft job after the war. In late August of that year, however, his aircraft employment ended. After 3 weeks of idleness, he accepted a job as a truck driver; he also worked part time as a musician in a night club. By late spring of 1946, he had given up truck driving and was working full time as a musician.

Many of the women also found jobs in new fields. A riveter became a beautician, and the change from an aircraft inspector to a waitress was also typical. Another woman, 21 years of age, who had been a riveter, was employed in 1946 as a papier maché molder in connection with preparing window displays. She had voluntarily withdrawn from aircraft work in July 1945, when her husband returned from overseas, but later she decided to reenter the labor market.

Mrs. F. M., age 44, who supports herself and two sons, was unemployed for several months following the loss of her job as an aircraft assembler. Although she wanted to operate a beauty shop, her plans did not materialize. In June 1946, she was a hand printer in a textile printing and dyeing establishment.

Those who entered business for themselves (10 percent of all those surveyed) chose a variety of enterprises. Mr. L., age 56, who had been an automotive machinist before the war and later an aircraft assembler, chose the jobbing machine field. A former service station operator (Mr. R.), age 41, became an apprentice metal fitter in an aircraft plant in August 1942; by the spring of 1945, he had advanced to metal fitter. After the war he had planned to "go into some phase

of transportation business, gasoline, tires, or oil, in Wisconsin, Minnesota, or southern California," because he didn't like "to be under a boss." He lost no time in carrying out these plans, and in June 1946 he was the sole proprietor of a transfer and storage business in southern California. A 31-year-old veteran of World War II returned to his old occupation, shoe repairman, after his work as metal fitter terminated shortly before VJ-day. After a brief period he started his own shoe-repair establishment.

## Earnings

In the winter of 1946, gross weekly earnings of men formerly employed in aircraft plants averaged \$51.65, declining 20 percent from the spring of 1945, owing to the reduction in hours worked and the shift of workers to lower-paid jobs in other industries. In the same period women's weekly earnings decreased about 26 percent. Between January and June 1946, weekly earnings for all employed workers had risen on the average about 7 percent, while hours increased 2 percent. In the 5 years from 1941 to January 1946, weekly earnings of persons with prewar employment experience had increased by more than half. After allowing for increases in prices of living essentials and for income-tax deductions, the amount of spending money available to those workers bought, on the average, only a little more goods and services than in 1941.

## Migration

The most spectacular aspect of the aircraft industry, in many respects, was the influx of thousands of workers from many sections of the country. At the end of the war, these workers, contrary to the expectations of many local observers, chose for the most part to remain in southern California. In spite of curtailed employment and increasingly unsatisfactory housing conditions, only one out of every three of the wartime-acquired residents left the area. Reasons for leaving included a desire to return to families, to find cheaper living conditions, to care for the ill at home, or to take up old jobs in the home community. Younger men moved in greater proportion than those over age 45.

Only about half of the workers who left returned to their prewar residences. Thus, only one-sixth of the workers who had come to southern California went back home, another sixth moved elsewhere, and the remaining two-thirds decided to remain in southern California. A few workers who had lived in southern California before the war left the area after VJ-day, so that in all, slightly more than a fifth migrated to places as far away as Michigan, Connecticut,

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New York, Arkansas, Tennessee, Missouri, Alabama, and West Virginia.

The experience of the workers surveyed does not support the notion that there has been a general—even a minor—exodus of workers out of southern California. The persistence of a great housing shortage, a tremendous increase in cars with out-of-State licenses, and a general increase in overcrowding everywhere in the area, suggest that southern California is not losing population, and that net migration is still to and not from the area.

### *Postwar Prospects*

Most of the workers, judging from the experience of the group surveyed, had received no formal training for the jobs they held in the aircraft industry. By the spring of 1945 almost half had taken training in aircraft jobs, and all except a negligible percentage had acquired skills sufficient to merit promotions. At the end of the war this group represented a great force of workers, with newly acquired skills, available for peacetime productive efforts.

In discussing their postwar plans in the spring of 1945, the majority of the men and slightly less than half of the women expressed a desire to remain in the same type of work, either in aircraft or in other manufacturing industries. Seventy percent planned to remain in the area, but almost 80 percent actually did remain.

The postwar contraction of the aircraft industry raises the question of whether all the workers who desire employment can be absorbed. Because of changes from the "moving assembly line" method of production to the "stationary jig" method, employment opportunities today are largely restricted to skilled craftsmen or all-round mechanics. If aircraft production falls to about 10 percent of the wartime peak and the Pacific Coast produces an anticipated 60 percent of this production,<sup>3</sup> between 35,000 and 45,000 workers will be retained in the major airframe plants in southern California, a figure far below the 280,000 wartime peak but well above the prewar level of 12,000.

By June 1946, according to the results of this survey, most of the aircraft workers, contrary to their plans, found jobs after VJ-day which were completely unrelated to their aircraft experience. War-time training and acquired skills had apparently been too specialized, although in some instances shifts to unrelated jobs represented a desire to get into other lines of work. It is not clear whether this situation indicates that former aircraft workers cannot readily transfer their acquired abilities, or that industrial development has not yet reached a point where these workers can be effectively utilized.

<sup>3</sup> Estimated in terms of total weight of aircraft produced.



## Readjustment of Veterans to Civilian Life<sup>1</sup>

**EDITOR'S NOTE.**—*This article is a summary report on the readjustment experience of a group of veterans of World War II who were studied by the Bureau of Labor Statistics in March and early April 1946. The study was designed to illustrate the problems that face returning veterans and to indicate points which might warrant further and more thorough investigation. Although the findings check fairly closely with available general statistics on the status of the entire veteran population as of March 1946, it was not intended that the data collected in the present study could be generalized to apply to all veterans.*

Although the problem of reabsorbing veterans of World War II into civilian life was not solved by March 1946, substantial progress had been made. In that month, the Bureau of Labor Statistics interviewed 2,432 ex-servicemen from a sample of Selective Service boards in urban areas,<sup>2</sup> of whom 76 percent were working and 6 percent were going to school. Compared with men in the labor force as a whole, relatively fewer veterans were employed; but their position was better than that of men who had been attached to such war industries as aircraft, ordnance, and shipbuilding. Sixteen percent of the veterans who were in the labor force when surveyed were jobless, in contrast with 6 percent of all men in the civilian labor force. On the other hand, the Bureau had found, 2 to 3 months earlier, that more than a

<sup>1</sup> Prepared in the Bureau's Wage Analysis Branch.

<sup>2</sup> The study covered veterans who, at the time of registration with their draft boards, lived in communities of 5,000 population or more, or in smaller communities in metropolitan areas. Names were picked at random from the files of boards in 80 communities of various size in 34 States. The selected draft boards were part of a 2-percent sample chosen by the Selective Service System to be representative in terms of certain characteristics of their registrants. Boards in the Selective Service sample which were outside of metropolitan areas and did not cover communities of 5,000 or more population were not asked to supply names for this study.

Each regional office of the Bureau obtained from the boards within its area a predetermined number of names, the number being in the same ratio to the total sample for the study as the 1940 urban population of that region was to the total national urban population.

Of the 2,432 veterans interviewed, 1,971 were either employed in nonagricultural activities for wages, salaries, or commissions, or seeking such employment. Only a limited amount of information was obtained from those who were students, self-employed, engaged in farming, or neither working nor seeking work. Therefore, in this analysis, discussion in all sections, except those on employment and on interval before starting work (the 2,432 interviewed) and earnings (1,536 veterans), is confined to the 1,971 employed and unemployed veterans.

It is planned to resurvey the same veterans at a later date to determine the extent of their progress toward readjustment.

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fifth were unemployed among a group of men, formerly war workers, who had continued in the labor market.<sup>3</sup>

About 1 out of every 11 veterans had moved from one community to another following separation. In all probability, a larger proportion of all veterans had migrated, since many who were selected for interview could not be located. As compared with the preservice situation, interregional migrants, for the most part, went to the West from the South and North Central regions. The Northeast was more stable.

### *Employment and Unemployment Experience*

#### EMPLOYMENT

Jobs and the schoolroom accounted for over four-fifths (82 percent) of the veterans interviewed during March 1946, including little more than 1 percent working part time and somewhat less than 1 percent temporarily laid off. Distributing the total, two-thirds of the veterans interviewed were employed for wages, salaries, or commissions in nonagricultural activities, 2 percent were working on farms, 8 percent were self-employed, and 6 percent were attending school. About 1 out of 7 was unemployed and looking for work.

With respect to changes in earnings, the greatest gains were registered by those who left civilian employment before the round of prestabilization wage increases had been completed. In terms of weekly earnings, for example, increases ranged from 52 percent for those beginning military service before 1942 to 20 percent and 4 percent, respectively, for those beginning military service during 1942 and after 1942. Veterans who returned to their preservice employers showed greater increases in earnings than those who took jobs with different employers.

Large numbers of the veterans abandoned their preservice occupations and industries to enter other fields, and the shifts were largely compensatory so that proportions engaged in various activities remained essentially unchanged. Slightly more than half of those who had been employed immediately before entering service had returned to their former employers.

Some of the veterans were waiting to enter school; while others suffering from illness or disability were, at least temporarily, prevented from seeking or accepting employment. In all, veterans

<sup>3</sup> See *Workers' Experiences During the First Phase of Reconversion*, in *Monthly Labor Review*, May 1946 (pp. 707-717). Seventeen percent of the male war workers were unemployed in June and early July 1946.

who were neither working or looking for work nor at school accounted for 3 percent of the total surveyed.<sup>4</sup>

As was to be expected, relatively more younger than older veterans were attending school. The former were more likely to be completing formal educations. Their return to school at an age when most of them would normally have been working was, in part, influenced by the availability of Federal assistance. It seems reasonable to suppose that the narrow range of jobs open to the younger veterans on their return—as illustrated by the relatively high unemployment of those under 25—may also have impelled some of them toward school as a means of widening their employment opportunities. Specifically, school attendance accounted for almost 12 percent of those under 25 years of age and less than 3 percent of the older veterans.

Although no conclusions can be drawn on the basis of only 140 Negro interviews in the sample, the indications are that the absorption of Negro veterans into civilian life has been less successful than that of whites.<sup>5</sup>

#### THE UNEMPLOYED

In general, the unemployed veteran was distinguished from the employed ex-serviceman in that he was younger, unmarried, and had relatively little schooling and limited employment experience.

Of the 1,971 veterans working at or seeking wage or salaried jobs, 18 percent were unemployed. This group included 24 percent of those 25 years of age or under but only 14 percent of the older men. Twenty-six percent of the single veterans but only 12 percent of the married were unemployed. It is interesting to note that the wives of a third of the unemployed married veterans were holding jobs or seeking work in March 1946, whereas among the employed group only a fourth had wives in the labor market. Nearly a third of the jobless

<sup>4</sup> The coverage of this study is different from that of the Monthly Report on the Labor Force on veterans in that the former excludes veterans who, at the time of selective-service registration, lived in nonmetropolitan communities of less than 5,000 population. Moreover, the veterans selected for interview in this study were picked sometime before the interviews began. Thus, some of those who were not yet in the labor market when their names were selected were looking for work or had found jobs by the time of interview. These factors probably explain why only 3 percent were found who were neither in the labor market nor at school, as against a larger percentage shown by the Monthly Report on the Labor Force. The distribution of the remainder corresponds closely with that reported to be in the Monthly Report on the Labor Force for March 1946:

	MRLF	BLS study
Veterans in labor force.....	94.0	94.0
Employed.....	80.0	79.0
Unemployed.....	14.0	15.0
Veterans in school.....	6.0	6.0
Total.....	100.0	100.0

<sup>5</sup> The situation of the Negro veteran is a good example of the kind of problem which seems to warrant further investigation.

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had been out of service more than 90 days but had not yet obtained their first post-separation jobs.

Veterans with relatively extensive formal education were more successful than the others in finding jobs. Only 14 percent of those who had completed highschool, including men who had attended college, were unemployed; whereas 21 percent of the men who had not gone beyond the third year of high school had been unable to find acceptable jobs.

An advantage in securing employment also appears to have been held by those with the relatively longest experience at the same type of work. Thus, veterans who had not worked in a single occupation for as long as a year before entering service showed a 32-percent unemployment rate as against 16 percent for those with longer experience in gainful employment. Occupationally, men who before entering service had been self-employed were unemployed to a lesser extent (13 percent)<sup>6</sup> than the group as a whole.

At first glance, it seems strange that men who had been separated from service before VE-day appeared to be having greater difficulties in finding and keeping jobs than those discharged later. Nineteen percent of those separated earlier were unemployed as compared to 14 percent of those released from service between VE-day and the end of 1945. The explanation may, in part, lie in the fact that disability and physical or mental unfitness for service accounted for a large proportion of the predemobilization discharges, so that men separated prior to VE-day may have been at a disadvantage in obtaining employment. The highest unemployment rates were for the group of men who were discharged after the beginning of 1946. Many of these were probably still exploring available job opportunities and this may explain why so high a proportion of them (31 percent) were jobless.

The incidence of unemployment was markedly greater among Negroes than among whites, and among those who had not at any time returned to preservice employers, compared with veterans who had resumed their old jobs.

#### READJUSTMENT ALLOWANCES

Indicative of the rapidity with which the veterans got started in civilian life is the fact that only 36 percent (716) of the 1,971 non-agricultural workers and unemployed veterans interviewed had applied for readjustment allowances. A small group (26) found jobs before they could draw their first benefit checks, and a number of others (52) were disqualified or ruled ineligible, so that less than 32 percent of the veterans interviewed actually received readjustment allowances. Of those who did, almost half (48 percent) drew 4 weeks'

<sup>6</sup> As compared with 18 percent for the group of 1,971.

benefits or less. A few (8 in number) were on the rolls for at least 40 weeks.

In addition to those who filed claims, 11 percent of the veterans had been involuntarily unemployed at some time following separation but had not applied for readjustment allowances. A third of this group explained that they had expected their unemployment to be brief. A sixth said they did not need the money and an approximately equal number stated what probably comes to the same thing—that they “didn’t want to bother.” About 13 percent had not applied because they did not know they were entitled to readjustment allowances. The remainder supplied a variety of reasons for not seeking benefits.

#### INTERVAL BEFORE STARTING CIVILIAN ACTIVITY

Nearly a third of those who took jobs or entered schools after separation did so within 2 weeks after becoming civilians. Almost two-thirds were working or in classrooms within 30 days, and five-sixths within 60 days. Only 7 percent took more than 90 days to get started on their first postseparation activity.

Possibly because of the need to wait for the beginning of school terms, students, on the average, experienced a longer postservice interval than those who went into gainful employment. By the end of 30 days, only 44 percent of the prospective students were attending classes, with 31 percent still not in school at the end of 60 days, including 16 percent who remained inactive at the end of 90 days.

Veterans interested in operating a business of their own, also did so with considerable speed, although many were aided by the fact that they had “going concerns” waiting for them. More than two-fifths of the “self-employed” men were under way within 2 weeks after separation.

There was a small group—12 percent of all those studied—who, as of March 1946, had neither worked nor attended school at any time following separation. A few had been out of the service for only 30 days or less, but almost half had been separated for more than 90 days. This last group accounted for over 30 percent of the unemployed veterans. The great majority of those surveyed had not only made an early start in taking up civilian duties but were still engaged in work or study at the time of the survey.

### *Job and Geographic Shifts*

#### RETURN TO PRESERVICE EMPLOYER

Under the Selective Service Act, an honorably discharged veteran who left his job to enter military service is entitled to reinstatement provided he meets certain conditions and provided further, that the circumstances of his employer have not so changed as to make rein-

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statement impossible or unreasonable. A substantial proportion of the veterans surveyed appeared to have availed themselves of this right. Half (51 percent) of those who had jobs prior to entering service returned to their preservice employers at some time after their separation from the armed forces.<sup>7</sup> A somewhat smaller proportion of Negroes made this choice than in the group as a whole.

A small group (8 percent) claimed to have made some efforts to return but had not done so. Frequently, the attempt consisted of nothing more than an inquiry as to current wages and working conditions followed by a decision to seek work elsewhere.<sup>8</sup> Failure to secure reinstatement was commonly attributable to postwar curtailments or shut-downs in the establishments where the veterans had formerly worked.

More of the older than the younger men took up their preservice jobs.<sup>9</sup> Among the likely explanations for this difference by age are (1) the older men tended to have greater family responsibilities and the resultant need for security made them more cautious about relinquishing their reemployment rights; (2) they also had longer employment prior to entering service and, therefore, had probably acquired greater familiarity with their own capabilities and the market for them; and (3) compared with younger men, the jobs to which the older veterans could return were probably more worth while and afforded the protection of seniority status.

Physical disabilities seem to have been no significant obstacle to resuming work with former employers, although some veterans could not perform their prewar duties. Those reporting disabilities returned to preservice jobs in virtually the same proportion as the others.

Men who entered the services early in the war showed considerably less inclination than later entrants to return to former employers, a difference probably related to age, since induction of older men started late. Of those whose service began before 1942, 38 percent returned, in contrast to 52 percent of those entering in 1942 and 1943 and 60 percent of the later entrants.

Just as the first into uniform were less apt to return to their former employers, so too with the first out. For example, of the men separated from the armed forces before VJ-day, a somewhat smaller proportion returned to preservice employers than was the case among those later separated. The difference between the two groups would be even greater if men out of service less than 90 days (and whose

<sup>7</sup> Some of these men may have been reinstated despite their failure to meet all the conditions specified in the act.

<sup>8</sup> Others may have made similar inquiries without reporting them to BLS interviewers as attempts to secure reinstatement.

<sup>9</sup> Of those 25 years of age and under, 44 percent returned; the proportion rose to 50 percent in the case of those aged 26 through 31, and to 59 percent for those 32 or older.



reemployment rights were still valid though not yet exercised) had been excluded. The smaller ratio among those separated before VJ-day probably reflects, among other things, the attraction of relatively high-wage war jobs which were no longer available to those released later.

#### INDUSTRIAL AND OCCUPATIONAL SHIFTS

Changes involving a shift from their "usual" <sup>10</sup> preservice type of work were largely compensatory so that the distribution of the veterans among industries and occupations remained essentially the same as before induction. Exceptions were mining and government, with a drift away from the former and a gravitation toward the latter. About 9 percent of the veterans held government jobs in March 1946, as compared with 5 percent before entrance into the armed services. On an over-all basis, more than half of the veterans reporting preservice employment were employed in their "usual" preservice industries in March 1946.

The character of the shifts made is illustrated by the 657 veterans reporting manufacturing as their usual preservice industry. Only 433 were still in factory employment in March 1946, yet the total number so engaged was 659. The 224 who had left manufacturing were scattered among all the major industrial groups <sup>11</sup> except agriculture, forestry, and fisheries. The 226 recruits to manufacturing, replacing those who left, came from all fields of work.

Similar shifts took place within specific manufacturing industries. For example, 36 veterans reported electrical machinery as their usual preservice industry while 35 were so employed in March 1946. However, only 23 were of the original group; the other 13 had transferred to leather, chemicals, machinery (except electric), finance, government, and transportation equipment plants as well as to trade, public utilities, and the service industries.

#### MIGRATION

The war resulted in a vast movement of internal migration in the United States, the general character of which has been modified only to a small degree by postwar shifts in population. Veterans of World War II, some of whom had also worked in war industries, participated in this geographic orientation. Compared with their preservice situation, 14 percent more veterans were living in the West in March 1946, with California the chief gainer. Almost half of the veterans who migrated from one region <sup>12</sup> to another went to the West

<sup>10</sup> The veterans were asked to state what they considered their "usual" preservice occupations and industries. Those who had not had as much as a year's experience in a single occupation or industry were tabulated as having no "usual" occupation or industry.

<sup>11</sup> Mining, construction, trade, finance, insurance and real estate, transportation, communication and other public utilities, service, and government.

<sup>12</sup> The Northeast, North Central, South, and West were the regions used in analyzing the direction of migration.

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at the expense of the South and North Central States which lost 2 and 3 percent, respectively. The Northeast was more stable.

Since a considerable amount of movement takes place within the boundaries of a single State, the interregional measure of migration does not give a complete picture of the changes made. In all, 9 percent of the veterans surveyed (including the interstate migrants) moved from one community to another after separation.<sup>13</sup> Among veterans living alone without dependents the proportion moving was almost three times as great. Married veterans with no children also changed communities to a somewhat greater extent than the average. Asked how many times they had moved since separation, more than five-sixths of all the migrants reported having moved only once. About one-ninth had moved twice and a few, 3 or 4 times.

Migration data for Negroes are too limited to justify generalization. The findings, however, are interesting. Of 122 Negro veterans, only 5 had lived in the West before entering service. By March 1946, 10 out of a total of 11 Negro inter-regional migrants had moved to the West. The largest contingent came from the South, which contributed 7 of its 58 preservice Negro residents.

The overwhelming majority of the veterans seem to have settled down by the time they were interviewed. Fewer than 6 percent were planning to move out of the communities in which they were then living.

### *Earnings*

Veterans who were employed for wages or salaries in March 1946 averaged \$46.75 a week or \$1.05 per hour<sup>14</sup> for an average workweek of 44.3 hours.

Returning veterans benefited from the general wage increases that occurred during their absence. In March 1946, most of the ex-servicemen surveyed were earning substantially more than on their last preservice jobs. The greatest gains were registered by those who left civilian employment before the round of prestabilization wage increases had been completed. Average hourly earnings<sup>15</sup> in March 1946 showed an increase of 55 percent for men who began military service in 1941 or earlier and a 26-percent gain for 1942 entrants. The wage stabilization program became effective during the latter months of 1942 and this is reflected in the 12-percent average increase registered by those entering service subsequently.

<sup>13</sup> Because of difficulties encountered in locating veterans who had moved, it is probable that the extent of migration is understated in this survey.

<sup>14</sup> These averages include on-the-job training subsidies received by 26 of the 1,536 veterans reporting March 1946 earnings. The subsidies amounted to \$90 a month for 20 of the veterans and \$65 for the others.

<sup>15</sup> Hourly earnings data are gross figures obtained by dividing weekly hours worked into gross weekly earnings, including premium overtime pay.

Weekly earnings show a similar pattern. Increases above preservice levels were 52, 20, and 4 percent, respectively, for those beginning military service before, during and after 1942. The small gain (4 percent) of the latest entrants indicates a reduction of working hours from high wartime levels as well as relatively small increases in average hourly earnings, the latter being influenced in part by loss of overtime premium pay.

Men who left civilian employment in 1942 or before averaged \$45.15 a week in March 1946 as compared with \$49.35 for those whose service began later. On an hourly basis, the early entrants averaged \$1.02 in March 1946 and the others, \$1.11. The difference may result from the fact that older men, with presumably better paying jobs, were inducted later than the younger men, many of whom were beginners in industry.

On the average, veterans who returned to their preservice employers showed greater increases in earnings than those who took jobs with different employers. For example, men who entered service in 1942, and who were working for their preservice employers in March 1946, had increased their weekly and hourly earnings by 27 and 30 percent, respectively, over preservice levels. The corresponding figures for those working for different employers were 12 and 19 percent.

Veterans working for their preservice employers in March 1946 also held the advantage in terms of dollars and cents for they averaged \$48.65 a week and \$1.09 an hour as compared to \$44.30 and \$1.00 for those who had changed employers.

Ignoring the time of entry into service and resumption or non-resumption of previous employment, it appears that the average veteran was earning approximately \$6.56 a week and 19 cents an hour more in March 1946 than in his last preservice job. His weekly earnings had risen 16 percent; his hourly earnings, 22 percent; and his average weekly hours of work had dropped 5 percent.

The characteristic differential in earnings as between Negroes and other workers was also evidenced in the present survey. Negro veterans earned an average of \$35.10 a week in March 1946 as compared to \$47.35 for white veterans. This difference of more than \$12 a week reflects the limited range of jobs open to Negroes and the resultant differences in occupational distribution. For example, only a sixth of the Negroes who were craftsmen and manual workers were employed at skilled jobs in March 1946 as compared to more than a third of the others. Negroes were much more heavily concentrated in unskilled and in service jobs. Comparing the pre- and post-service periods, the gap between the earnings of the Negroes and of the others remained about the same in dollar terms.

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## Construction of Prefabricated and Conventional War Housing Projects<sup>1</sup>

INTEREST in the subject of prefabrication and the hope that it might point the way to major economies in house building led to a detailed study by the Bureau of Labor Statistics of labor requirements and other characteristics of 24 war housing projects. Two-thirds of the projects were prefabricated, and the others were built by site methods. Comparing the two groups, the saving in man-hours at the prefabricated projects was only about 8 percent. This figure is computed on the basis of number of dwelling units and floor area, without adjustment for other differences (such as in design of the houses, material supply, and local construction practices) between the two types of projects. Such adjustments, if made, would reduce the saving in man-hours at the prefabricated projects.

All projects studied, prefabricated as well as conventional, used lumber as their main structural material. The prefabrication systems included were totally different in design, materials, factory operations, and erection operations from the metal systems now under consideration for the veterans' housing program.

The prefabricated group studied may reasonably be divided into 3 subgroups, according to design and construction system. Man-hour requirements for these three subgroups differed greatly: on one they were about a sixth greater than for conventional construction, on another almost 2 percent less than for conventional, and on the third nearly a quarter less.

These comparisons are for corresponding operations. They consisted of the customary site work at the conventional projects, and at the prefabricated projects of the site work combined with work at the prefabricating plants and in related operations, such as transportation of the factory-made panels.

The comparisons are valid among the projects included, but the data are insufficient for a general comparison between prefabrication and conventional construction. In fact, there are strong indications that findings would have been different if there had been a different distribution of the types of construction among the various locations and contractors. Furthermore, the special conditions governing the war housing program were, of course, vastly different from those of either private or public operations at other times.

<sup>1</sup> Prepared in the Division of Construction and Public Employment by Alexander C. Findlay. A bulletin presenting additional and more detailed information will be published in the near future. This study was conducted at the request of the Technical Division of the National Housing Agency.

While the reduction in total man-hours at the prefabricated projects was rather small, work at the construction site was cut down substantially. Of the total man-hours required for site work, from a fifth to three-fifths were transferred to the prefabricating plants and to related operations such as transportation. This wide range was caused by differences in the type and extent of prefabrication used at the various projects. In no case, however, was site work reduced to a negligible figure; the lowest figure was 261 man-hours, equivalent to almost 5½ 8-hour days for a crew of 6 men.

In comparing the groups of projects, important limitations and qualifications must be kept in mind because of differences other than the construction method. Labor supply differed among the projects, as did site conditions; the latter, in a few cases, hindered the construction work seriously. Material supply, weather, management ability of the contractors, geographical customs influencing the methods of operation, and other pertinent factors, all varied among the projects.

The effect of these differences is illustrated by the site work for three pairs of prefabricated projects, each pair identical or nearly so. For one pair, site man-hours per house were the same within about a tenth of 1 percent, but in the remaining two cases site man-hours per house were respectively 13 and 14 percent greater for one project of the pair than for the other. Such differences for essentially the same work indicate the caution necessary in interpreting the findings.

In addition, the houses differed in accommodations offered. The prefabricated group was more affected by wartime conditions than the others, as indicated by omission of gutters and downspouts, use of metal or terra cotta flues in place of masonry chimneys, and other emergency measures. These design features have no fundamental relationship whatever to prefabrication, but were adopted by the agencies for which the projects were built solely to minimize material and labor requirements. Nevertheless, they mean that the two types of houses were not directly comparable.

### *Unit Man-Hour Requirements*

BY TYPE OF CONSTRUCTION

The man-hour comparisons are between equivalent operations. For prefabrication, these are the man-hours at the site for all erection operations, the man-hours for production and other operations at the prefabrication plants, and the man-hours for transportation. For the conventional projects, the man-hours are for all site operations.

Man-hours per dwelling unit ranged from 440 to 1,010 for all operations for the prefabricated projects, and from 559 to 1,646 for the conventional projects. Three of these projects should, however, be excluded from any comparison: one prefabricated project, delayed by conditions beyond the control of the prefabricator and erector, on

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which the man-hours were much higher than would otherwise have been necessary; and two conventional projects, one of "temporary dwelling unit" grade and consequently of very light construction, and the other an early project having excessive man-hours for reasons unrelated to the construction system used.<sup>2</sup>

For the remaining projects, man-hours per dwelling unit were 440 to 972 for "prefabs" and 769 to 1,385 for conventionals. Averages of these, weighted by the number of dwelling units in each, were 682 and 917, respectively. These figures show an apparent saving in man-hours of almost 26 percent for the prefabricated group.

Time required per dwelling unit is misleading, however, because of the great difference in unit size; average gross floor area was about 32 percent greater for the conventional houses than for the prefabricated houses. On the basis of gross floor area the man-hours per thousand square feet were only 2 percent less for the prefabricated than for the conventional projects—978 as against 999. The range was from 633 to 1,313 hours for the prefabricated projects, and from 835 to 1,740 for the conventional. The ratio of unit man-hour requirements for prefabricated to conventional houses is 74.4 percent when computed on a per-dwelling-unit basis, and 97.9 percent on a per-thousand-square-feet basis. The first of these ratios is substantially too low, because it disregards the difference in average size; the second ratio is too high, because man-hour requirements are not strictly proportional to gross floor area, particularly for the mechanical trades. A reasonable adjustment is to regard work on the structure proper as approximately proportional to gross area, and work in the mechanical trades (plumbing, heating, and electrical work) as approximately proportional to the number of dwelling units. On this basis, using four-fifths of the work as representing structure and one-fifth as representing mechanical trades,<sup>3</sup> labor requirements under prefabrication were about 92.7 percent as great as under site construction. Adjustment for differences in finish and in features between the two groups has not been attempted, because it could be based only on opinion.

An interesting comparison exists between an outstanding project of each group. Each project was built in a highly congested war area and under exceedingly difficult conditions—one in the East and the other in the West. Each was built by a contractor of outstanding ability, having sufficient resources to obtain all equipment that he considered advantageous. Both projects were unusually large, the prefabricated one being the larger of the two and possibly exceeding

<sup>2</sup> All prefabricated projects were classed as demountable (i. e., permanent but designed to permit disassembly for moving) rather than temporary, but 4 of these were of lighter construction than the others. Attention is called to these in the comparisons of subgroups of prefabricated projects.

<sup>3</sup> This division between structural and mechanical work is substantially that found on these projects.



the number of houses for highest efficiency. The conventional project had difficulty in obtaining materials, but this was overcome. It was also somewhat less favorably located with respect to labor supply, largely because of its distance from the central part of its labor-market area, but partly because of differences between the areas in which the two projects were located.

Each of these two projects had outstanding management for its type of operation. At the prefabricated project man-hours per dwelling unit were 82.3 percent, but man-hours per square foot were 120.8 percent, of those at the conventional project. On the basis of 80 percent of the work proportional to gross area and 20 percent proportional to number of dwelling units, unit labor requirements at the prefabricated project were about 111.2 percent of those at the conventional project. This comparison between the two projects takes account only of the number of square feet and the number of dwelling units, and ignores a number of important differences in the houses themselves which made the accomplishment at the conventional project even more remarkable.

Although this comparison is revealing, it cannot be regarded as typical because of the unique characteristics of the projects and the contractors. The production record of either project could be equaled only by a contractor having the highest management ability and operating on a large scale.

#### BY PREFABRICATION SYSTEM

The basic materials for all prefabrication systems were lumber and either plywood, insulating board, or other building board.

Thirteen projects used panels which may be considered as roughly equivalent to ordinary frame construction subdivided into separate units for factory manufacture and convenient handling. Wall panels, for example, consisted of a core of vertical members with top and bottom plate (corresponding to the studding and supplementary members in frame construction), covered on each side with plywood or other sheet material. These usually contained insulation and vapor barrier and, when desired, were covered with shingles or siding on the exterior. In most cases the "panellization" of floors, exterior walls, partitions, ceiling, and roofs was complete, or virtually so; in one case the panels were supplemented by a light wooden frame, and in another case they were preassembled into three-dimensional sections about 8 feet wide. For two of these projects the procedure was similar, except that only walls, partitions, and ceilings were panellized. The floors and roofs were built at the site from separate pieces of lumber. Six of the 13 projects were of the type known as stressed-skin, where core and plywood covering of vertical panels are bonded together to act

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jointly in resisting any compressive or bending load; in the remaining cases, the designs assumed transfer to the core of all structural load.

Another project was partially panellized, according to a different design which omitted studding. Complete factory-made panels were used for all parts of walls and partitions containing door or window openings. These had a light post at each vertical edge, making up part of a simple wooden frame. For the remainder of the walls and partitions; similar posts were put up at uniform distances and likewise made a part of the frame; the posts were then connected by sheets of plywood on both surfaces, with insulation between for the exterior walls. The floors were prefabricated, but the roofs were not. The remaining project was not panellized in the customary sense, but was built with a simple wooden frame in which widely spaced posts were connected by a horizontal member at the top, and by another just below the windows; this frame was covered on the exterior by a heavy insulating board coated on both sides with inorganic material. Interior partitions were similar, with the same coated board on one side of the frame. Floors and roofs were prefabricated into panels, with the floor panels supported on factory-made concrete beams connecting the foundation piers.

For convenience in analysis, these projects were divided into three groups: Standard panel prefabrication; stressed-skin, which in many respects is similar to standard panel; and incomplete prefabrication, consisting of the last two projects described, plus the two which used standard panel construction for walls, partitions, and ceilings along with conventional construction for floors and roofs. The last group is much less homogeneous than the other two. These classifications include most but not all of the wood-construction systems used to date.

In general the prefabricators' basic designs of parts were used, but for a few of the projects slight modification was needed to permit disassembly. Such modification increased man-hour requirements slightly.

Among the three subgroups of prefabricated projects, man-hours were lowest for the stressed-skin houses and highest at the incompletely prefabricated houses. There were, however, several important differences between the groups other than type of design. All of the incompletely prefabricated projects were built in a section of the country where man-hours for conventional projects also tended to be high, whereas two-thirds of the stressed-skin houses were built in a section where man-hours for conventional projects were low. Although data are insufficient for proof, it seems likely that there is a considerable difference between these two sections in productivity, including such related items as established construction methods. The average number of houses per project was under 400 at the in-

completely prefabricated groups, about 700 at the stressed-skin group, and even higher at the ordinary panel group. An outer covering of siding or shingles was used on two-thirds of the other prefabricated projects, but not on any of the stressed-skin group. The 4 stressed-skin projects having the lowest unit man-hours were satisfactory for their purpose, but were considerably lighter than the others. These 4 are regarded by officials of the local housing authority as suitable only under emergency conditions. Obviously a man-hour comparison, based exclusively on the number of houses and the floor area, exaggerates the saving in comparison either with conventional construction or with most of the other prefabricated projects. In contrast, one standard-panel project and the two incompletely prefabricated projects not using special frames were notable examples of substantial and highly satisfactory houses. Such above-standard construction is not reflected in a comparison based solely on man-hours and physical quantities.

As indicated in table 1, man-hours per dwelling unit and per 1,000 gross square feet, at the three subgroups of prefabricated projects, were in ratio of roughly 4:5:6. The individual projects within each group were consistent to the extent that the project with the highest man-hours had the best houses from the standpoint of completeness, careful workmanship, and provision of minor features useful to the occupants. There was a general tendency toward the same consistency among the other projects within each group, but with exceptions.

TABLE 1.—Unit Man-Hour Requirements on War Housing Projects, by Type of Construction

Type of construction	Man-hours		Requirements as percentage of conventional requirements		
	Per dwelling unit	Per 1,000 gross square feet	Per dwelling unit	Per 1,000 gross square feet	Composite
Conventional.....	917.2	998.8	100.0	100.0	100.0
Prefabricated.....	682.1	978.3	74.4	97.9	92.7
Stressed skin.....	564.3	798.7	61.5	80.0	75.9
Standard panel.....	716.3	1,041.7	78.1	104.3	98.5
Incomplete.....	877.0	1,236.0	95.6	123.7	117.3

### *Man-Hour Requirements for Site Work, by Type of Construction*

While prefabrication brought a comparatively small reduction in total man-hours, it transferred almost three-eighths of the man-hours away from the erection operations. Separate figures for erection and prefabrication were obtained for all 15 projects, except the smaller of the 2 constructed by site prefabrication (i. e., in a temporary plant

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operated near the site by the general contractor) on which erection time and prefabrication time were combined in one set of pay rolls.

For the 14 projects having separate records, site work ranged from 40 to 80 percent of total man-hours, with an average of 64.2 percent; that is, work transferred away from the site was from 20 to 60 percent of the total with an average of 35.8 percent. The bulk of this off-site work was in the prefabricating plants; the remainder was in transportation of the factory-made panels, and in the prefabricators' general administrative operations, including design and development work.

The smallest transfer of work away from the site was, of course, at the incompletely prefabricated houses. Here it ranged from 20 to 28 percent, with an average of 23 percent. There was only a slight difference in this respect between the two projects which might be termed "incomplete standard prefabrication" and the two using unique designs, in which loads were borne by a frame rather than by studding embodied in the panels.

There was no consistent difference between the standard panel and the stressed-skin groups, the percentage of work transferred away from the site ranging for the two groups from 33 to 53 and from 21 to 60, respectively.

The lowest proportion of total man-hours at the site, 40 percent, was achieved at two identical projects, built simultaneously on adjoining sites by different contractors but prefabricated at the same plant. While erection work was well organized and well managed by all site contractors, the low man-hours for site work seem to have resulted largely from careful design on the prefabricator's part, transfer to the prefabricating plant of all feasible operations except the mechanical trades, and a simple and convenient system of assembly.

Average man-hours for site work were 439.9 per dwelling unit, equivalent to 11 40-hour weeks of work for 1 man or more than 9 8-hour days of work for a crew of 6 men. The lowest man-hours, between 261 and 262, were for the two identical projects mentioned in the previous paragraph. Even so, the lowest man-hours are equal to almost 33 8-hour days for 1 man, or almost 5½ 8-hour days for a crew of 6 men, for the site work per dwelling unit.

No evidence whatever supported the apparently widespread impression that, thus far, a few hours' work by a small crew is sufficient to change a vacant lot and a load of prefabricated parts into a finished house, ready for occupancy. This impression probably results from lack of knowledge of the work to be done. Unloading of the panels, placing them in position, and securing them in place is only part of the job. There must also be preparation of the foundation; underground sewer and water work;<sup>4</sup> installation of plumbing, heating, and

<sup>4</sup> Beneath the house and running to the public lines.

electric fixtures; completion and connection of such "roughing in" as was installed at the factory, and installation of the remainder; final painting and decorating; installation of any gutters and downspouts; application of roofing; laying of linoleum floors; hanging of window shades; installation of trim and hardware; even cleaning of windows. These items cannot be transferred completely to the factory under the systems studied. Some of them (such as foundation work or sewer and water lines under the houses themselves) obviously must be done at the site under any construction system, although their extent is affected to some degree by the design of the house.

There have been a few spectacular demonstrations of erection of a house by a small crew within an hour or so, but in all such cases that have come to attention a large part of the necessary work had been done prior to the demonstration. Site man-hours would presumably be smaller for sectional houses, assembled at the factory into 3-dimensional units of standard length and width, each containing 1 or more rooms, but separate data for erection were not available for the project of this type.

Site workers were grouped into nine classifications by degree of skill or responsibility.<sup>5</sup> The differences between prefabricated and conventional projects in distribution of man-hours among these classifications were quite small, except for foremen and laborers. On the prefabricated projects, almost 30 percent of the man-hours were for laborers, while on conventional projects the figure was only 21 percent. One reason was that materials were delivered in highly processed form, but needed to be unloaded, carried, and lifted into place. Furthermore, hand excavation for footings and placing of footing concrete, important items of laborers' work, cannot be transferred to the prefabricating plants. For foremen and subforemen, man-hours were on the whole higher than for the conventional projects, but less so than is suggested by the difference shown in table 2. This large difference reflects the detailed supervision given on the largest of the conventional projects. The slightly higher percentage of clerical man-hours for the conventional projects, despite a smaller average number of dwelling units, was caused by the fact that four of these were built on cost-plus-fixed-fee contracts, requiring more formal and more detailed job records than are customary.

<sup>5</sup> Administrative (superintendents and assistant superintendents, including bona fide superintendents for the special trade contractors); professional (architects and technical engineers); clerical (mainly time-keepers and material clerks, in some cases included typists or stenographers, and at a few of the larger projects included purchasing agents, expeditors, cost analysts, and others); service (mainly watchmen, but included water boys, etc., where employed); supervisory (foremen and subforemen); skilled (the standard building craftsmen); apprentices; other semiskilled (the recognized helpers, and truck drivers); and unskilled (laborers).

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TABLE 2.—Site Man-Hours Per Dwelling Unit, by Degree of Skill and Occupation <sup>1</sup> and by Type of Construction

Degree of skill and occupation	Prefabricated		Conventional	
	Man-hours per dwelling unit	Percent of total	Man-hours per dwelling unit	Percent of total
All skills and occupations.....	439.9	100.0	917.2	100.0
Administrative.....	6.7	1.5	12.7	1.4
Professional.....	.5	.1	1.1	.1
Clerical.....	11.5	2.6	24.8	2.7
Service.....	4.9	1.1	13.3	1.5
Supervisory.....	17.9	4.1	93.5	10.2
Skilled.....	233.8	53.2	500.6	54.5
Apprentice.....	6.6	1.5	9.9	1.1
Other semiskilled.....	26.5	6.0	66.7	7.3
Unskilled.....	131.5	29.9	194.6	21.2
Skilled workers and foremen <sup>2</sup> .....	247.8	56.3	599.1	65.3
Bricklayer.....	.7	.2	15.1	1.7
Carpenter.....	156.1	35.5	304.2	33.2
Electrician.....	7.5	1.7	16.9	1.8
Equipment operator.....	2.4	.5	19.8	2.2
Painter.....	56.1	12.7	80.7	8.8
Plumber.....	15.7	3.6	37.1	4.0
Roofer.....	3.6	.8	26.9	2.9
Sheet metal worker.....	2.9	.7	10.5	1.1
All other <sup>3</sup> .....	2.8	.6	87.9	9.6

<sup>1</sup> Excludes prefabricated project for which pay rolls were for prefabrication and erection combined; excludes the 1 abnormal prefabricated project and the 2 abnormal conventional projects. These exclusions change percentage distributions only slightly. <sup>2</sup> Excludes labor foremen. <sup>3</sup> Mainly lathers and plasterers.

In the percentage distribution of skilled workers and foremen by trade, the similarities between prefabricated and conventional operations are much more notable than the differences. In each case carpentry made up about 33 to 35 percent of the site man-hours. Site work in carpentry was reduced slightly less proportionately than was all other work, but this was caused in part by the special characteristics of the projects. Application of prepared roofing by carpenters in numerous cases explains the low man-hours for roofers in the prefab group. Plumbers and also electricians each had about the same percentage of hours for the two groups, but of course a much smaller number of hours for the prefabs. The main reasons were differences in the installations and differences in the extent to which helpers were used, and also the partial installations at the prefabricating plants for five of the projects. The reduction in site man-hours at the prefab projects was proportionately less for painting than for most other work, because of a difference in the type of work done at the plants and at the site. In most cases the factory painting consisted of priming coats applied to large surfaces, a type of work done rapidly under any reasonable conditions, while much of the site work was the more exacting and time-consuming finish painting of millwork and trim. The large "all other" category at the conventional projects consisted mainly of lathers and plasterers.



*Work at the Prefabricating Plants*

## PRODUCTION

Exact comparisons between prefabricating plants cannot be made because of great differences in the extent of work done and in the manner of keeping records. Some plants had complete time records for all workers; commonly, however, records were kept for workers engaged in direct production only; other plants had records for direct production workers and for some but not all of the other workers. Those whose time was not charged directly to the project were ordinarily paid by the month, did work of a type needed for all projects or all products on which the company was engaged, and were connected financially with the project only by an accounting charge made at some stage according to the firm's own procedure.

Administration and general overhead naturally varied greatly between firms, because of the range in services which they performed. It was of course higher for those firms operating complete design departments and taking full responsibility for their product (essentially the permanent prefabricators) than for the firms at the other extreme which merely carried out production operations according to shop drawings and material lists provided by other firms. Even the extent of supervision varied greatly between those projects for which there were specific records, ranging from less than 4 percent to more than 11 percent of the man-hours for production workers.

On that account, table 3 shows man-hours per dwelling unit and per thousand square feet only for the production workers.

TABLE 3.—Unit Man-Hours for Production Workers in Prefabrication Plants <sup>1</sup>

Man-hours per dwelling unit	Number of projects	Man-hours per 1,000 gross square feet	Number of projects
Under 100.....		Under 100.....	
100-149.....	4	100-199.....	4
150-199.....	3	200-299.....	4
200-249.....	2	300-399.....	1
250-299.....		400-499.....	4
300-349.....	3	500-599.....	
350-399.....	1	600-699.....	
400-449.....		700-799.....	1
450-499.....	1	800 or over.....	
500 or over.....			
Total.....	14	Total.....	14

<sup>1</sup> Excludes foremen, and administrative, professional, clerical, and service employees.

The man-hours for production work were governed to a considerable degree by the extent of work done at the plants. In 6 cases the outer surface of the exterior wall panels was covered with wood shingles, asbestos shingles, or wood siding, and in the remaining 9 cases it was not. Part of the plumbing or electric wiring or both was done at the prefabricating plants for 5 of the projects, but not

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for the other 10. For 2 of the projects the final finish on interior wall and ceiling surfaces was applied at the factory, whereas ordinarily the factory painting ended with priming. In most projects the entire structure was panellized, while for some the roofs and floors were built by site methods and the gypsum-board covering on interior surfaces was applied at the site after erection to factory-made panel cores. Both the detail obtainable through records and the size of the sample are insufficient for any accurate adjustment for most of these differences, so that the range of figures shown is not a measure of the comparative efficiency of the various producing establishments.

#### NONSTRUCTURAL WORK AND CORRESPONDING SITE WORK

Much less nonstructural work was performed in the prefabricating plants than might be expected. Plumbing installations of supply and soil pipes were made in the panels in 2 cases; in each of these, man-hours for all plumbing work were less than half of the average figure for the other prefabricated projects. In both cases, the factory plumbing work was done by or for the prefabricator<sup>6</sup> and plumbing work at the site was done by a separate plumbing contractor. Generally, the plumbing work was highly specialized, with materials prepared in sets at a temporary shop at the site, so that the work performed inside the houses was strictly installation. At one project the plumbing work included making up both hot-water and cold-water assemblies in a temporary shop, installing them in an unfinished panel already erected between bathroom and kitchen, and then putting on the building board which had been omitted from one side of the panel to permit the installation. All of this was site work, however, and was equally suitable to conventionally built projects of sufficient size. In fact, the same procedures, except for preassembly of the water supply lines, were followed at some of the conventional projects. Assemblies comparable to plumbing panels are, of course, adaptable to houses otherwise built by conventional methods, and such assemblies have already been announced by their manufacturers.

Electrical work was done at the prefabricating plants for 4 projects—in 2 cases by the prefabricators, and in 2 by the same electrical contractors who completed the work at the site. Average man-hours per house for electrical work were about 11 percent greater for these 4 projects than for the other 11 prefabricated projects where all electrical work was done at the site, although there was no appreciable difference between the 2 groups in average number of rooms, or average floor area, or circuits and outlets provided. Unlike plumbing, electrical wiring is distributed throughout a house, and when this is prefabricated into panels a considerable number must contain

<sup>6</sup> In one instance this work was sublet, along with manufacture of some of the panels, to a small nearby firm not engaged in the plumbing business.

some part of the wiring system. The study would indicate that the additional work of wiring many of the panels as separate, independent units and then of connecting these during erection more than offsets any time saving gained from factory conditions for a part of the electrical work. The number of projects included is insufficient, however, for conclusive proof of this indication. It is also possible that some of the proposed types of prefabrication (using metal or concrete rather than wood as their principal material) may not be well suited to a complete electrical installation during erection.

Because of the type of heating used (circulating heaters at most prefabricated projects, and simple furnace-blower combinations at the remainder) there was no heating work to be done at the prefabricating plants, except to leave openings for flues and smoke pipes and to provide openings with grilles in some of the partition panels for thermal air circulation between rooms.

A priming coat of paint was generally applied to woodwork in the factories, ordinarily by spray gun. One of the prefabricators, using exposed plywood surfaces throughout the interior, gave these their final finish at the plant, so that no painting or decorating of these was done after erection. Site man-hours for painters on this firm's projects were less than half the average for the entire prefabricated group. Another prefabricator used plywood on both sides of the panels, and covered the interior surfaces with a cloth-backed material similar to wall paper. This was cut to exact size at the factory, with cut-outs for openings (windows, doors, electric switches, convenience outlets, etc.), and was merely pasted and hung at the site. What time saving, if any, was achieved by this plan cannot be estimated because of an extreme shortage of competent painters and paperhangers at this project, which distorted the site man-hours.

Prefinished hardwood flooring, ready for use after laying, was used in most of the prefabricated projects but has no relationship to prefabrication; it was used also in some of the conventional projects, and has been used extensively by private builders.

While both the projects studied and the instances of nonstructural work done at the prefabricating plants were too few for definite conclusions, the study suggests that a man-hour saving may be expected from nonstructural work carried out at the prefabricating plant for only certain types of work: those for which there is no operating or mechanical connection to be made between panels; and those for which work can be concentrated in a very small part of the house, within one or at most a very few adjoining panels. For either type, of course, factory work is necessarily limited to those items not requiring excessive protection or care in order to prevent damage during transportation.

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## Adjustment of Wages to Changes in the Cost of Living<sup>1</sup>

### *Basic Factors Affecting Wage Renegotiations*

PRESENT uncertainty in the price structure has induced a number of unions to negotiate contracts providing for wage negotiations during the life of the agreement. These unions do not want wages to remain frozen for a year or longer (depending on the length of contract term) in the face of important recurring price and other changes in the economy which may seriously undermine the standard of living of the workers covered.

The broadest type of wage-reopening clause permits wage renegotiation at any time without defining conditions for taking this step, although generally a specified number of days' notice is required. Other contracts, however, permit wage renegotiation only at specified time intervals, or make it contingent upon such factors as changes in the cost of living, the national wage-stabilization policy, general economic conditions, profits, wages in the industry or area, or some other stipulated factor. The present article is limited to a consideration of contract clauses which make wage adjustments contingent upon changes in the cost of living.

Workers' greatest concern is not with their "dollars and cents" wages, but rather with the amount of goods and services that those wages can buy, that is, their "real wages." In a stable economy, with an adequate supply of goods and services on the market at fairly stable prices, monetary wages come pretty close to measuring real wages. But when wages remain unchanged and prices rise, the purchasing power of the dollar declines, and workers suffer a decrease in real wages, with a resultant drop in their standard of living.

Under normal conditions, it has been the policy of organized labor to oppose the principle of gearing wages to the cost of living. Unions have felt that such a policy would freeze the level of real wages and prevent employees from participating in the benefits of expanding business and increased labor productivity and from obtaining a larger share of the national income; also, that it would lead to lower wages should prices drop. Therefore, they regard increases in the cost of living as only one of the elements, but not the sole or even the major factor, which justify higher wages.

Once a wage standard has been agreed upon and incorporated in a contract, unions are much concerned in preserving for the workers the standard of living provided in the contract. On this account, some union agreements provide that if the cost of living changes during a

<sup>1</sup> Prepared by Florence Lutz of the Bureau's Industrial Relations Branch.

given contract term, the subject of wage rates may be reopened. Other agreements provide for automatic and mandatory wage adjustments to cost-of-living changes.

If an agreement simply provides for wage renegotiations in the event that the cost of living changes, numerous problems may arise as to when adjustments are to be made and in what amount. Some agreements attempt to meet the former problem by laying down conditions under which reopening may occur. On the other hand, automatic wage-adjustment plans restrict wage changes during the life of the agreement to those incorporated therein, and furnish no opportunity for renegotiating the wage rates.

Once a company and a union have come to a general agreement on the desirability of relating wage adjustments to cost-of-living changes during the term of the contract, it is important that both should also agree on the standards to be used in measuring cost-of-living changes and on the procedure to be followed in making the wage adjustments.

The index most frequently used is the consumers' price index of the Bureau of Labor Statistics, formerly known as the "cost-of-living index."<sup>2</sup>

### *Prevalence of Wage-Adjustment Clauses*

In 1939 less than 5 percent of the agreements covering manufacturing industries and very few of those for the nonmanufacturing group provided for wage adjustment during the life of the agreement. As the cost of living began to rise because of the war, an increasing number of agreements were concluded containing wage-reopening clauses. In 1942, about 40 percent of manufacturing agreements had such provisions. Approximately a third of these based wage reopening on changes in the cost of living; a few made reopening contingent on such factors as profits, prevailing wages, etc.; but the majority did not specify conditions for renegotiation.<sup>3</sup>

Under the wage-stabilization program of the National War Labor Board, clauses relating wage adjustments to changes in the cost of living were either eliminated from agreements or suspended as a result of the Board's General Order 22. Under this order no such clauses were to be enforced after October 1942 if the wage adjustments under an automatic "escalator" clause would result in rates which were more than 15 percent above the average straight-time hourly rates prevailing on January 1, 1941.

Since VJ-day, there has been a decided increase in the number of agreements which provide in one form or another for wage reopening.

<sup>2</sup> For explanation of this index, see article on p. 781 of this issue.

<sup>3</sup> See Wage Adjustments to Cost of Living Under Union Agreements, May 1942 (U. S. Bureau of Labor Statistics mimeographed report).

A recent analysis by the Bureau of Labor Statistics of 99 key company<sup>4</sup> agreements indicates that 71 agreements, covering 72 percent of wage earners covered by the sample, provide for wage reopening during the life of the agreements. Of these 71 agreements, only 5 relate wage renegotiations exclusively to changes in the cost of living.

### *General Wage-Reopening Clauses*

The broadest type of wage-reopening clause permits negotiations on the subject of wages, for any reason, at any time during the life of the agreement. The greatest flexibility in wage renegotiations is provided in this type of clause.

The union and the company shall have the right, during the term of this agreement, to reopen negotiations at any time or times with a view to a revision of wages.

Generally, however, a specific number of days' notice is required before wages may be reopened.

Wage adjustments through the plant may be considered by special negotiation at any time during the life of this agreement, upon 30 days' written notice to the company or the union.

Some general wage-reopening clauses limit the frequency with which the agreement may be reopened.

Due to economic changes, the parties hereto agree to review wages at 90-day intervals and will endeavor, subject to the approval of the designated government agency, to adjust rates found to be unsatisfactory.

The following clause permits wage reopening by either party at 6-month intervals, and at any time by mutual consent.

Either party may reopen wage negotiations once every 6 months upon 15 days' written notice to the other party, unless reopened at a shorter interval by mutual agreement.

Other agreements provide for reopening after a specified date. The agreement from which the clause below is taken became effective December 15, 1945. Reopening was permitted after July 1, 1946; beyond that time, there are no limitations on reopening.

The present wage scale as amended by written memorandum of even date between the parties hereto shall remain in effect during the life of this agreement, provided, however, that at any time after July 1, 1946, either party may, upon written notice to the other given after said date, reopen this agreement for negotiation upon a general wage adjustment only. The retroactive date of any adjustment which may be reached as a result of such negotiations shall not be earlier than the date of giving of such notice.

<sup>4</sup> These companies were selected as a sample because they are generally regarded as setting the pattern of wages and working conditions in 22 major industry groups.



Agreements which extend beyond 1 year generally provide that wages may be reopened annually. The following excerpt is from a 2-year agreement:

If at the end of the first year of this agreement there shall be an increase in the cost of living over the present cost of living, at the request of the union a conference shall be held to determine whether an increase in wages shall be granted to the workers. Should the parties at the conference fail to agree, then the question shall be submitted to an impartial chairman, whose decision shall be final and binding upon the parties. Whatsoever decision is arrived at shall be binding upon the parties for the unexpired balance of the term of this agreement.

### *Cost-of-Living Wage-Adjustment Clauses*

Clauses relating wage adjustments to cost of living are of two general types—permissive and automatic. Under a permissive clause, wages may be reopened for reconsideration and revision if there is a change in the cost of living, but there is no guaranty that a wage adjustment will actually be made. Both parties, or in some cases the union only, may have the right to reopen the wage question.

An automatic clause makes specified wage adjustments mandatory whenever certain stipulated changes take place in the cost of living. There are also combined permissive and automatic plans which specify automatic adjustments within certain limits, after which the question of wage rates becomes a subject for further negotiations.

#### PERMISSIVE CLAUSES

##### *Changes in Cost of Living Not Specified*

Some permissive clauses merely state that, "under the agreement . . . the wages of workers may be revised in the case of a change in the cost of living." Such general clauses allow room for disagreement as to whether there has been a sufficient change in the cost of living to warrant reopening. Disagreements may also arise because no index is specified for use as a measuring rod. The basis for computing cost-of-living changes and wage adjustments is not set forth; nor is the starting point from which cost-of-living changes are to be measured stipulated, although presumably it would be the date on which the agreement becomes effective.

Some permissive clauses refer only to wage increases in the event of an increase in the cost of living. Other agreements provide for wage revisions, both upward and downward (see second clause).

At any time during the term hereof, the union shall have the right to demand an increase in wages, based upon an increase in the cost of living.

It is further agreed that should the cost of living as published by the U. S. Bureau of Labor Statistics Index show a substantial increase or decrease, either party to this agreement may reopen the question of wage scales for appropriate revision upon 15 days' notice.

If both upward and downward wage adjustments are permitted, limits may be set on downward adjustments to prevent a reduction in rates below those in effect at the time the agreement is signed.

Due to the unsettled state in world affairs it is agreed that should the cost of living show an increase, then only shall the union have the right, upon 15 days' notice, to open the wage schedule of this agreement for adjustment, when conferences shall be held and any decision reached shall become effective immediately.

Should the union invoke this clause and an increase in wages be granted by reason thereof, then the company, should the cost of living show a decline, shall have the right to ask for a revision in the wage schedule; however, any revision under this clause shall not be lower than the rates herein established.

#### *Changes in Cost of Living Specified*

In order to avoid disputes as to whether or not it is time to start renegotiations, some permissive clauses require a specified change in the cost of living before the wage question may be reopened. The amount of change may be expressed in a specified percentage increase in the cost of living (as shown in the first clause below), or the agreement may specify the point change in the index to be used in wage adjustments (as in the second clause).

In the event of an increase in the cost of living of at least 5 percent from the effective date of this agreement . . . the union may ask for a general increase for its members.

This agreement shall be in effect and full force from February 15, 1946, to April 30, 1947. In the event, however, that the cost-of-living index as established by the Department of Labor's Bureau of Labor Statistics, known as the consumers' price index, should, at any time during the term of this agreement, show a rise of 10 or more points by comparison with the index on February 15, 1946, the union shall have a right to reopen the wage provisions of this agreement.

#### *Frequency of Reopening*

Some permissive clauses limit the number of times the contract can be reopened. This may be done by specifying that a definite period of time must elapse after the agreement goes into effect before a revision in wages may be requested. Other clauses permit reopening at specified dates (as in the second clause).

At the end of 6 months, should the cost of living vary to a decided extent, the union or the employer shall have the right to open negotiations for a wage adjustment. 15 days' notice in writing must be given by either party.

If, during the life of this agreement, there should occur a further rise in the cost of living as indicated by the Massachusetts State Department of Labor (Division of the Necessities of Life), the union may then, and in that event, request an adjustment of [piece-rate] prices on 30 days' notice. Such request is to be limited to two periods a year during the life of this agreement, that is, in March and August of each year.

Some agreements limit the number of times the agreement may be reopened, without specifying the dates when renegotiations may take place.

Both parties to this agreement reserve the right to take up the question of wages whenever deemed advisable, but such request may not be made oftener than twice a year.

Agreements which do not place restrictions on wage negotiations may, nevertheless, limit the number of times wage adjustments may be requested by specifying the effective dates for any such adjustments.

In the event of national currency regulation or other changes which shall affect the purchasing power of the dollar, or in the event of an increase or decrease in the cost of living, the wages herein provided to be paid shall be subject to revision, upwards or downwards, as the case may be, and for that purpose, conferences between the association and the union shall be held . . .

However, any revision in the wages, if so determined, shall not become effective until whichever of the following dates first succeeds the date of such dispute: May 15, July 15, September 15, or January 15.

#### *Provisions for Arbitration*

Although some permissive wage-adjustment clauses merely provide for the reopening of wage negotiations, with no guaranty that any adjustment in rates will actually take place, others stipulate that if the parties fail to agree on the amount of the wage adjustment, the matter is to be referred to arbitration for final determination.

If at any time from the date of this agreement there is a change in cost-of-living index of 5 or more percent as indicated by the cost-of-living index of the United States Department of Labor, either party may present a written request for a proportionate adjustment in wages, and in the event of disagreement as to such request the question shall be arbitrated in the manner hereinafter provided for in article VII.

#### *Right to Strike*

Strike or lock-out restrictions during the term of the contract may be lifted in the event the parties are unable to agree on wage adjustments following cost-of-living changes.

In the event that the cost-of-living index published by the National Industrial Conference Board for the city of Milwaukee changes 5 percent or more from [date] index, either party may request a review of wage rates by written notice to the other, and if no mutually satisfactory agreement is reached with respect thereto, the right to strike or lock-out may be resorted to without impairment or regard to any other provision of this contract, it being understood that no strike, slow-down, or stoppage of work shall ever be resorted to for the purpose of securing an increase in earnings unless and until the said index increases no less than 5 percent.



## AUTOMATIC WAGE-ADJUSTMENT PROVISIONS

Automatic cost-of-living adjustment or escalator clauses make mandatory a specified wage adjustment if there is a change in the cost of living. By specifying a precise relationship between the amount of wage adjustment and the change in living costs, such provisions automatically determine when adjustments are to be made and what they shall be. Wages may be automatically adjusted to a specified change in the index, or they may be adjusted to whatever change takes place in the index within a specified time interval. Wage adjustments may be upward only as the cost of living rises; or both upward and downward adjustments may be provided. Clauses requiring downward adjustments usually set a floor below which wage rates will not be reduced, despite further downward movements in the BLS consumers' price index.

*Adjustment to Percentage Changes in Index*

The two clauses below provide for a percentage wage increase corresponding to the percentage change in the consumers' price index. The first specifies a minimum percentage change, but the second refers only to a "percentage increase." The first example also specifies the BLS "cost of living" figures, whereas the second refers to "governmental statistics."

It is hereby agreed that should cost-of-living figures for the city of . . . issued by the U. S. Bureau of Labor Statistics, at any time during the term of this agreement, show an increase of 3 percent or more above the figures issued nearest to March 1, 1946, a like percentage of increase shall be made on all rates specified in this agreement, such increases payable from the date such increases in cost-of-living figures were issued by the U. S. Bureau of Labor Statistics.

The union may request a revision of the wage rates upwards if, as and when the cost of living increases, so that the real wages of the employees are reduced by the higher cost of living. If the union shall establish that there has been a percentage increase in the cost of living, the employer shall be required to grant a corresponding increase in the wage rates.

Governmental statistics shall be used to determine the increase in the cost of living.

*Adjustment to Point Changes in Index*

The following agreement bases wage adjustments on point changes in the cost-of-living index. It also sets a specified date before the first wage adjustment can be made, but thereafter adjustments follow specified changes in the index without reference to the intervals when adjustments are made.

It is agreed that if, during the term of this contract, there shall be a variation in the cost of living, there shall be corresponding adjustments in the wages and hourly rates. The adjustments shall be arrived at as follows:

If prior to July 1, the U. S. Bureau of Labor Statistics for Chicago shall show a 5-point rise in the cost-of-living index as compared with the corresponding index for January 1, then the increase of  $2\frac{1}{2}$  cents per hour to be paid starting July 1 shall be paid from the date said cost-of-living index has gone up 5 points. If after July 1 said index shall vary 4 points or more at any one time, then the hourly rate of pay shall be adjusted 2 cents for each 4 points from and after the date of such increase or decrease in said cost-of-living index. From and after the date of any such adjustment, if there should be a further variation in said cost-of-living index during the life of this contract of 4 points, then there shall be a further adjustment of 2 cents per hour from the date of such increase or decrease in said cost-of-living index.

In some agreements which provide for upward and downward adjustments, the cost-of-living change required for a wage decrease is greater than that required for a wage increase. In the following example, wages are automatically increased if the index has risen by more than 5 points as of a specified date, and are automatically decreased if the index falls by more than 10 points. This agreement also sets a ceiling on the amount of the upward wage adjustment.

Furthermore, on July 1, 1946, all maximum position rates (except those excluded from the adjustments of September 1, 1945) shall be further increased 2 cents per hour. However, if living cost for Cincinnati, as measured by the Consumers Price Index for Moderate-Income Families in Large Cities of the U. S. Bureau of Labor Statistics or any successor publication compiled in the same manner and on the same basis, shall at July 1, 1946, vary by more than 5 points upward or 10 points downward from the index at September 1, 1945, then at the request of either party this wage adjustment of maximum position rates of 2 cents per hour shall be increased or decreased at the rate of  $\frac{1}{2}$  cent per hour for the sixth complete point upward or the eleventh complete point downward and for each subsequent complete point of variation from the index at September 1, 1945. However, at July 1, 1946, no adjustments shall be effected for more than 10 complete points in excess of the index at September 1, 1945.

#### *Percentage or Flat Changes in Wages*

A major consideration in any wage adjustment plan is whether, as a result of changes in the cost of living, adjustment shall be by a flat monetary amount or on a percentage basis. A percentage wage increase gives the more highly paid workers a larger money increase, while a uniform cents-per-hour wage adjustment is more favorable to the lower paid workers. A percentage change retains the same relative difference between job classifications, but alters existing monetary differentials between the rates for different classifications. A flat increase in cents per hour gives the lower paid workers a larger percentage increase and reduces the spread between them and the more highly paid workers. The following clause specifies a percentage adjustment based on a percentage change in the index.

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Wages shall be increased 5 percent for each total 5-percent increase in the cost of living subsequent to (date of signing agreement).

Wages will be reduced 5 percent for each 5-percent reduction in the cost of living subsequent to (date of signing agreement), except that wages will not be reduced below the amounts set forth in this agreement.

The level of real wages will rise or fall when percentage wage adjustments are based on point changes in the index, depending on the level of the index at the time the agreement is negotiated. When the index is above 100, a percent increase in wages numerically equal to a point change in the index is more than the actual price change as measured by the index; when the index is below 100, such an adjustment is less than the price change. These considerations apply to the following example:

If, during the term of this agreement, the quarterly cost-of-living index for Indianapolis, as published by the Bureau of Labor Statistics of the U. S. Department of Labor, shall increase by 5 index points over its level on (date of agreement), then the prevailing wage rate shall be increased by 5 percent; and if said index should increase by 10 index points over its level on (date of agreement), then the prevailing wage rate shall be increased by 10 percent.

Similarly, if the index shall decrease by 5 index points, the wage rate shall be decreased by 5 percent; and if the index shall decrease by 10 index points, the wage rate shall be decreased by 10 percent.

Wage adjustments in terms of a flat cents-per-hour increase (or decrease) based on point changes in the index, are shown in the agreement quoted below:

It is agreed that whenever the cost of living shown by the official monthly cost-of-living index of the Bureau of Labor Statistics, U. S. Department of Labor, has risen 5 full points, using 113 as the base, an increase of 4 cents per hour in base wage rates will be granted, the increase to become effective from the first day of the pay period following the official monthly publication by the Bureau of the report disclosing a 5 full point increase in the cost-of-living index. For each additional 5 full point increase in said index, an additional increase of 4 cents per hour will be granted effective in like manner.

Whenever the cost of living as shown by said official monthly index has decreased from any point 5 full points, 4 cents per hour shall be deducted from base wage rates effective as in the case of any increase, and for each additional decrease of 5 full points an additional 4 cents per hour will be deducted from said rates.

Wage adjustments for lower-paid workers only are provided for in one agreement.

Effective with Sunday of the pay period next following the publication of the U. S. Department of Labor Cost of Living Index for Buffalo, dated \_\_\_\_\_, a pay rate increase of 1 cent per hour shall be granted to each employee with hourly rates less than \$1.85, for each full 1-point rise in the Cost of Living Index above the level of (date), which is recorded as \_\_\_\_\_. Hiring rates specified in this agreement will be raised the same number of cents per hour.



## PERMISSIVE AND AUTOMATIC PLANS COMBINED

Some agreements combine permissive and automatic wage-adjustment plans. Within certain limits wage adjustments are automatic. Beyond these limits, wage rates become a subject for negotiations between the company and the union.

Whenever the index of the cost of living for the Cincinnati area, as issued by the Bureau of [Labor] Statistics, U. S. Department of Labor, shall rise or fall 4 points above or below an index figure of 111, then the company, as soon as possible thereafter, but in no case longer than 30 days after the publication of the index, shall correspondingly raise or lower the wage scale according to the following schedule:

Hour rate:	Increase or decrease
Up to 59 cents .....	\$0.02 per hr.
60 cents to 85 cents .....	.03 per hr.
86 cents to \$1.10 .....	.04 per hr.
\$1.11 or over .....	.05 per hr.

Subsequently, each additional increase or decrease of 4 points in the index shall cause, in the same manner, an additional change in the wage scale on the same schedule.

It is further agreed that the increases and decreases mentioned above shall continue automatically and without further negotiations as long as the index mentioned above shall remain between 103 and 150. If the index shall rise above 150 or fall below 103, it is contemplated that the necessary adjustment would be sufficiently severe so that the entire matter of wage rates should be reopened for negotiation.

## COST-OF-LIVING BONUSES

Wage adjustments based on changes in the cost of living are an addition to existing wage rates and become an integral part of these rates. Allowances for increased cost of living, however, may take the form of a bonus. A bonus is supplementary to and separate from the regular wage rates. In the first of the two following clauses, wages are to keep pace with upward changes in cost of living, on a monthly basis. In the second clause, a bonus is paid when the index rises by 5 percent, the bonus representing 5 percent of weekly earnings instead of the hourly base rate (as is customary). The bonus is discontinued when the index decreases by as much as 5 percent.

Each successive month during the life of this agreement, the cost of living as reflected by the Bureau of Labor Statistics will be examined and the percentage of increase above the cost of living as of (date of agreement), will be paid to all employees in a supplemental check each month.

During the term of this agreement a bonus of 5 percent of total weekly earnings will be paid by the company when the U. S. Department of Labor indicates that the cost of living has increased 5 percent, and for each additional 5 percent increase in living costs, a corresponding bonus will be paid.

Each 5 percent bonus will be in effect until the survey indicates that living costs have decreased 5 percent or more.

The following clause contains a percentage cost-of-living bonus granted at the time the contract became effective. This bonus continues as long as the cost of living does not decline, but in the event of a decrease, the initial bonus is reduced by the same percentage as that by which the index drops. In the case of a further rise in the cost of living, no additional bonus is provided.

Other than the agreed exceptions, all other employees shall have added to their weekly earnings a 10-percent cost-of-living bonus. This cost-of-living bonus shall remain at 10 percent as long as no decrease occurs in the cost-of-living figure for December 15, 1945, as shown in the index of the cost of living for Boston published by the Bureau of Labor Statistics of the United States Department of Labor. Should such a decrease occur then from month to month thereafter, commencing in each month with the first full week thereof, the percent of the decrease in the cost of living will be determined by subtracting from the cost-of-living figure for December 15, 1945, as described above, the cost-of-living figure shown in each succeeding monthly issue of the said publication. The amount of such decrease in the cost of living shall be converted to the nearest full percentage and the cost-of-living bonus for that month shall be obtained by subtracting the percent of the decrease from 10 percent.

# Wage and Hour Statistics

## Wage Structure of the Industrial Chemical Industry, January 1946<sup>1</sup>

STRAIGHT-TIME hourly earnings of all plant workers in the industrial chemical industry in the United States averaged \$1.14 in January 1946, including incentive earnings but omitting premium pay for overtime, night work, and nonincentive bonuses. Approximately half of the workers earned between \$1.00 and \$1.30 an hour while about a fourth received at least \$1.30. Only 1.5 percent of the workers were paid less than 65 cents.<sup>2</sup> These findings were obtained in a Bureau of Labor Statistics survey of the wage structure of establishments manufacturing a selected group of industrial chemicals made in January 1946.

The study covered establishments primarily engaged in the manufacture of tanning materials, natural dyestuffs, mordants, assistants, sizes, primary and finished coal-tar products, bone black, carbon black, lamp black, acids, alkalis and salts, alcohols, ammonia, carbon bisulphide, carbon tetrachloride, ethylene glycol, formaldehyde, and citral. Excluded, however, were plants primarily engaged in the manufacture of plastic materials and electrochemical and electro-metallurgical products.<sup>3</sup>

### Regional Differences

Straight-time average hourly earnings were highest in the Pacific and Border States, exceeding the Southeast, the lowest wage region, by more than 50 percent. The Great Lakes and Southwest were slightly above the national average of \$1.14, whereas the Middle

<sup>1</sup> Prepared in the Bureau's Wage Analysis Branch by Donald L. Helm. The field work was under the direction of the Bureau's Regional Wage Analysts. More detailed information on wages in the industry is available in a mimeographed report (Wage Structure, Industrial Chemical Industry, January 1946).

<sup>2</sup> The over-all averages and distributions include all workers except administrative, executive, professional, and office employees. Occupational averages are shown for only a selected number of key jobs. Apprentices, learners, and handicapped workers are excluded from occupational averages but are included in the over-all averages and distributions. The number of workers in the tables represent the approximate employment on all shifts in all establishments with 8 or more employees rather than employment in the plants actually surveyed.

<sup>3</sup> Pay-roll and other pertinent data were obtained by the Bureau's field representatives from 255 establishments employing 64,340 workers—about three-fifths of all plants with 8 or more workers and more than two-thirds of total employment in this branch of the chemical industries.

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Atlantic and New England States were below. One out of three workers in the Southeast earned less than 65 cents an hour in contrast with 1 out of 40 in the Southwest and less than 1 out of 1,000 in the Pacific region.

In general, wage rates for men in the key occupations studied followed the regional pattern shown by the over-all averages, with highest earnings usually reported in the Pacific region and the lowest in the Southeast and New England. The relative position of each region, however, was not the same for all occupations; moreover, the amount of the regional differentials varied considerably among jobs. For such important groups as chemical operators and maintenance workers, the highest and lowest regional averages differed by 30 to 45 percent.

TABLE 1.—Percentage Distribution of All Plant Workers in Industrial Chemical Industry by Straight-Time Average Hourly Earnings,<sup>1</sup> United States and Selected Regions, January 1946

Average hourly earnings <sup>1</sup>	United States <sup>2</sup>	New England	Middle Atlantic	Border States	South-east	Great Lakes	South-west	Pacific
Under 50.0 cents.....	( <sup>3</sup> )	0.1	( <sup>3</sup> )		0.1			
50.0-54.9 cents.....	0.2	.2	( <sup>3</sup> )		5.7	( <sup>3</sup> )		( <sup>3</sup> )
55.0-59.9 cents.....	.3	1.2	0.1	0.2	10.6	( <sup>3</sup> )	( <sup>3</sup> )	
60.0-64.9 cents.....	1.0	.7	.4	.4	17.3	0.4	2.5	( <sup>3</sup> )
65.0-69.9 cents.....	1.0	3.8	.4	.8	7.9	.7	2.3	
70.0-74.9 cents.....	2.2	4.2	1.1	1.3	14.8	2.1	5.3	0.2
75.0-79.9 cents.....	2.2	7.1	1.8	2.2	3.7	2.2	3.1	.2
80.0-84.9 cents.....	3.0	6.7	3.9	2.3	6.2	1.7	4.2	.4
85.0-89.9 cents.....	4.3	4.0	5.4	4.5	3.9	4.0	2.5	1.5
90.0-94.9 cents.....	5.1	4.2	5.4	6.8	5.3	3.0	8.7	1.4
95.0-99.9 cents.....	7.6	3.1	8.3	10.3	3.4	7.8	5.5	2.2
100.0-104.9 cents.....	7.7	13.1	9.5	6.2	3.1	5.9	4.9	13.1
105.0-109.9 cents.....	8.1	6.1	13.3	4.1	4.4	6.6	1.7	9.8
110.0-114.9 cents.....	11.2	17.6	14.3	7.8	3.9	11.5	5.9	12.4
115.0-119.9 cents.....	6.8	8.8	6.0	3.5	3.8	10.1	6.9	8.0
120.0-124.9 cents.....	8.1	6.8	6.9	8.1	2.1	9.8	7.5	12.2
125.0-129.9 cents.....	7.7	2.2	6.3	6.0	1.5	10.7	6.5	13.6
130.0-134.9 cents.....	5.6	5.5	5.3	6.7	.8	6.4	3.5	3.8
135.0-139.9 cents.....	4.3	1.7	4.7	3.5	.3	4.5	4.8	4.5
140.0-144.9 cents.....	3.1	.2	1.2	2.0	.2	5.4	7.7	2.7
145.0-149.9 cents.....	2.3	1.1	2.4	2.5	.1	1.1	2.5	6.7
150.0-159.9 cents.....	5.4	.6	2.0	14.0	.2	4.4	9.4	4.1
160.0-169.9 cents.....	1.3		.9	1.9	.4	.7	3.9	.8
170.0-179.9 cents.....	1.2	.3	.2	4.5	.2	.7	.7	1.7
180.0-189.9 cents.....	.1	.1	.1	.1	.1	.2	( <sup>3</sup> )	.2
190.0-199.9 cents.....	.1	.1	.1	.2		.1		.2
200.0 cents and over.....	.1	.5	( <sup>3</sup> )	.1				.3
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total number of workers.....	83, 114	1, 625	30, 006	13, 803	1, 994	21, 352	8, 068	4, 346
Over-all average hourly earnings <sup>1</sup> .....	\$1.14	\$1.03	\$1.11	\$1.20	\$0.79	\$1.16	\$1.15	\$1.22

<sup>1</sup> Excludes premium pay for overtime and night work.

<sup>2</sup> Includes data for other regions in addition to those shown separately.

<sup>3</sup> Less than .05 of 1 percent.

### Occupational Differences

Maintenance workers comprise a large proportion of the plant labor force (one-fourth); those at the higher skill levels showed the highest average hourly earnings of any of the selected jobs studied. In the

five maintenance jobs <sup>4</sup> studied, earnings ranged from \$1.47 for lead burners to \$1.33 for carpenters (table 2). Among other workers, relatively high rates were reported for working foremen, compressors,

TABLE 2.—Average Hourly Wage Rates (Straight-Time Hourly Earnings)<sup>1</sup> for Selected Occupations in Industrial Chemical Plants, United States and Selected Regions, January 1946

Occupation, grade, and sex	United States <sup>2</sup>		Middle Atlantic		Border States		Great Lakes	
	Number of workers	Average hourly rates	Number of workers	Average hourly rates	Number of workers	Average hourly rates	Number of workers	Average hourly rates
<b>Men</b>								
Absorbermen.....	260	\$1.21	195	\$1.20	11	\$1.32	28	\$1.32
Autoclave operators.....	233	1.16	128	1.15	23	.98	40	1.37
Carboy fillers.....	229	1.04	102	1.01	18	1.04	71	1.05
Carpenters, maintenance.....	883	1.33	345	1.33	121	1.36	232	1.34
Chemical operators, class A.....	7,246	1.30	1,629	1.18	1,852	1.42	2,147	1.25
Chemical operators, class B.....	6,306	1.15	1,659	1.07	842	1.18	2,073	1.17
Chemical operators' helpers.....	5,271	1.01	2,085	.98	910	1.05	1,188	1.04
Compressors.....	142	1.32	22	1.08	93	1.40	18	1.27
Cylinder fillers.....	132	1.10	86	1.13	22	1.00	4	( <sup>3</sup> )
Driers, class A.....	336	1.24	180	1.29	30	1.23	61	1.22
Driers, class B.....	531	1.03	385	1.03	37	1.03	57	1.13
Drum fillers.....	736	1.06	421	1.07	150	1.17	86	.96
Electric-cell men.....	368	1.25	184	1.22	91	1.29	51	1.28
Electric-cell repairmen and cleaners.....	388	1.19	167	1.32	54	1.08	110	1.14
Electricians, maintenance.....	1,206	1.38	357	1.35	223	1.42	271	1.37
Evaporator men, class A.....	399	1.23	167	1.22	65	1.32	90	1.17
Evaporator men, class B.....	194	1.13	58	1.09	9	( <sup>3</sup> )	26	.96
Filling-machine tenders.....	690	.94	70	1.25	62	.99	118	.92
Filters, class A.....	372	1.20	261	1.19	2	( <sup>3</sup> )	47	1.22
Filters, class B.....	453	1.09	330	1.08	57	1.12	29	1.07
Guards.....	860	1.08	327	1.01	150	1.12	254	1.17
Janitors.....	1,507	.93	565	.93	148	.85	455	.97
Kettle men, class A.....	600	1.26	543	1.27	3	( <sup>3</sup> )	28	1.23
Kettle men, class B.....	143	1.02	81	1.05	18	1.13	34	.95
Laboratory assistants.....	918	1.06	213	.95	171	1.16	319	1.08
Lead burners.....	328	1.47	112	1.50	55	1.54	105	1.44
Machinists, maintenance.....	1,290	1.37	445	1.39	202	1.39	319	1.35
Millers, class A.....	208	1.19	126	1.20	13	1.27	28	1.18
Millers, class B.....	396	.98	237	.98	24	.97	44	1.01
Mixers, class A.....	370	1.20	232	1.19	12	1.31	64	1.16
Mixers, class B.....	543	1.02	352	1.02	34	1.01	72	.95
Pipefitters.....	1,948	1.35	655	1.30	386	1.45	492	1.34
Pumpmen.....	550	1.14	204	1.17	106	1.21	81	1.02
Stillmen, class A.....	686	1.27	410	1.27	61	1.38	129	1.22
Stillmen, class B.....	378	1.15	216	1.13	54	1.13	42	1.07
Stock clerks.....	683	1.13	215	1.09	79	1.25	240	1.12
Truck drivers.....	1,217	1.13	540	1.15	161	1.09	284	1.14
Truckers, hand.....	863	.92	391	.94	60	.90	181	.95
Truckers, power.....	220	1.08	95	1.11	21	.99	76	1.07
Watchmen.....	861	.90	250	.87	352	.96	109	.90
Working foremen, processing departments.....	798	1.33	140	1.29	83	1.43	232	1.22
<b>Women</b>								
Chemical operators' helpers.....	312	.98	69	1.00	32	.87	204	.99
Filling-machine tenders.....	209	.77	55	.84	39	.85	98	.72
Janitors.....	166	.91	76	.88	6	( <sup>3</sup> )	70	.96
Laboratory assistants.....	1,205	.95	520	.88	246	1.03	306	1.02
Stock clerks.....	48	1.06	12	.94	6	( <sup>3</sup> )	18	1.18

<sup>1</sup> Excludes premium pay for overtime and night work.

<sup>2</sup> Includes data for other regions in addition to those shown separately.

<sup>3</sup> Insufficient number of workers to justify presentation of an average.

<sup>4</sup> In this report the terms "occupation" and "job" refer to the occupational classifications used by the Bureau for wage-study purposes, although many of these are not occupations in the strict sense of the term. Copies of the job descriptions used in the survey are available on request.

and class A chemical operators. In none of the key jobs did men plant workers average below 90 cents; for the relatively few women plant workers (less than 5 percent of the plant labor force),<sup>5</sup> earnings ranged from \$1.06 for stock clerks to 77 cents for filling-machine tenders.

On an industry-wide basis, straight-time hourly earnings of men plant workers averaged nearly one-fifth higher than those of women (\$1.15 and 96 cents, respectively). Only 1 out of 11 men in contrast with 1 out of 4 women, earned less than 85 cents an hour. At the upper end of the wage scale, about 1 out of 4 men but only 1 out of 45 women averaged at least \$1.30.

Differences in the over-all averages for men and women are partially attributable to a variation in their duties; jobs requiring higher levels of skill were performed almost exclusively by men. However, differences in average hourly rates were apparent for the few selected occupations in which both men and women were employed. Laboratory assistants, who accounted for about a third of all women plant workers, earned about 10 percent less than men performing similar duties.

#### *Variation of Wage Rates With Size of Establishment, Size of Community, Unionization, and Method of Wage Payment*

Differences in wage rates among plants are generally influenced by such factors as size of establishment, size of community, extent of unionization, and method of wage payment.<sup>6</sup> Although the specific influence of each of these factors has not been isolated, size of establishment appears to be most closely associated with variations in wage levels.

For comparable jobs, plants employing over 500 workers paid an average of about 15 percent more than establishments with 51 to 500 workers and about one-fourth more than plants with 8 to 50 employees. These relationships held in the three regions—Middle Atlantic,<sup>7</sup> Great Lakes, and Border States—where the industry was most heavily concentrated.

Because a number of the biggest chemical establishments were in small communities, the more usual finding, that wages are highest in the largest cities, was not evident in this industry. Nationally,

<sup>5</sup> Two-thirds of all the women in the industry were office workers.

<sup>6</sup> Plants varied in size from those employing fewer than 10 workers and manufacturing a single product to those producing heterogeneous commodities and employing as many as 5,000 workers. The great majority employed under 500 workers but accounted for less than 50 percent of the industry's employment. Establishments were classified as unionized if more than half of the workers were employed under terms of a union agreement.

In the analysis by size of community, establishments were classified according to the size of the largest city in the wage area.

<sup>7</sup> The Middle Atlantic States alone accounted for one-third of the plants and three-eighths of all workers in January 1946.



rates averaged about one-twelfth higher in communities with less than 100,000 persons than in more populated areas. This pattern, however, was not duplicated in all regions, nor for all occupations within a given region. New England alone showed a slight tendency toward higher earnings in the largest communities.

Slightly more than half the establishments included in the 1946 survey were unionized but, since this group included many of the largest establishments, fully seven-tenths of all workers studied were in unionized plants. Regionally, the proportion of workers employed in such establishments ranged from half in the Southeast and Border States to at least nine-tenths in the Great Lakes, Pacific, and Middle West.

Wage rates of union workers in the country at large exceeded those of nonunion workers in 7 out of every 10 occupations studied; the difference for comparable jobs averaged about 3 percent. Union workers held the greatest advantage in New England and the Southwest where average wage levels were about one-third and one-fourth higher, respectively, than those for nonunion workers. In the Border States and Southeast, where several large plants were not operating under union agreements, earnings averaged about 10 to 15 percent higher for nonunion workers than for union workers.

Workers paid on the basis of individual or group productivity comprised only about 3 percent of the plant labor force. This low incidence of incentive work may be attributed in large measure to two factors: (1) a substantial proportion of the plant labor force was engaged in maintenance work or other activities to which incentive systems are not generally extended, and (2) the time cycles of chemical processes are frequently predetermined.

In the limited number of jobs in which both methods of wage payment were used, workers paid on an incentive basis averaged about 5 percent more than time workers. This differential is related, in part, to the higher wage level of some of the larger plants where the majority of the industry's incentive workers were employed.

### *Wage and Related Practices*

The industrial chemical industry, more than many other manufacturing industries, had adopted vacation and sick leave plans and retirement pensions for plant workers by January 1946.

*Vacations and sick leave.*—The proportion of establishments granting vacations after 1 year of service (11 out of 12) was roughly the same for both plant and office workers.<sup>8</sup> Vacations were typically 1 week in length for plant workers and 2 weeks for office workers.

<sup>8</sup> The data on paid vacations and paid sick leave refer only to definite provisions for such leave and exclude informal arrangements that may exist in some plants.

Formal provisions for paid sick leave covered plant workers in about one-seventh of the establishments studied. Plans for office workers were less frequent but tended to be the more liberal, with the majority providing 2 or more weeks' leave in contrast to 1 week generally granted plant workers.

*Insurance or pensions.*—Nearly three-fourths of all establishments studied contributed in whole or in part to one or more insurance or pension plans for their workers. There was an unusually large number of establishments (one-fourth) reporting retirement pension plans, although life and health insurance plans were more common.

*Hours of work.*—A 40-hour workweek was reported by more than half of the establishments studied; three-tenths had a 48-hour schedule for men and one-fifth reported this workweek for women. Because of temporary changes in production schedules and absenteeism, actual hours are frequently longer or shorter than these scheduled hours. In addition, the schedules frequently differ from the workweek beyond which premium overtime is paid.

*Shift operation.*—Partly because of the continuous nature of some chemical operations, extra shifts were common, with about seven-tenths of the establishments operating two or more shifts. Roughly two-thirds of these plants paid shift differentials, generally amounting to 5 cents an hour or less in the case of second-shift workers, and from 5 to 10 cents an hour for third-shift workers.

*Lunch periods and bonuses.*—Paid lunch periods and nonproduction bonuses, while of importance in individual establishments, exercised little influence on average earnings in the industry. Formal provisions for paid lunch periods for first-shift workers, though more common than in most manufacturing industries, were reported by only 1 out of 11 plants. In 2 out of 5 establishments studied both plant and office workers received bonuses not directly related to worker output. Averaged over all workers in the industry, such payments accounted for less than 1 cent an hour.

## Cooperatives

### Operations of Consumers' Cooperatives in 1945<sup>1</sup>

THE year 1945 marked another high point in the consumers' cooperative movement as regards membership, business, and value of goods produced. The retail distributive volume reached an estimated \$680,000,000 and the local service business totaled \$12,356,000. The distributive and service business of central cooperatives also increased, to \$186,600,000. Goods produced in cooperative factories of central federations during the year were valued at \$60,577,789.

Operating reports, however, indicate that both local cooperatives and their central federations found 1945 conditions more difficult than those in any of the war years, and earnings were generally somewhat smaller than in 1944. Among the retail associations, the urban stores (generally handling groceries and meats only) found gainful operation more difficult than did the farmers' stores (which usually handle a wide variety of items). Petroleum associations on the whole had a relatively more successful year than did the store associations. Data on patronage refunds are available only for a small group of distributive associations; among these, the refunds of the store associations averaged 4.1 percent of sales and those of the petroleum associations 7.8 percent of sales.

"Earnings" made by the retail associations which are members of wholesale associations include also the refunds which they received on their patronage of the wholesale. For 1945 the wholesales (district and regional) made refunds amounting to \$7,105,077.

Nearly 3,600 retail associations were affiliated with regional wholesales at the end of 1945, and 20 regional wholesales in turn were members of National Cooperatives, Inc. (the Nation-wide purchasing and productive federation).

The estimated number, membership, and business of the various types of consumers' cooperatives in the United States, as of the end of 1945, are shown in table 1.

<sup>1</sup> A detailed report on operations of consumers' cooperatives in 1945 will appear in a forthcoming bulletin.

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TABLE 1.—Membership and Business of Consumers' Cooperatives in 1945, by Type of Association

Type of association	Total number of associations (estimated)	Number of members (estimated)	Amount of business (estimated)
<i>Local associations</i>			
Retail distributive associations.....	4,550	1,760,000	\$657,500,000
Stores and buying clubs.....	3,000	825,000	360,000,000
Petroleum associations.....	1,500	910,000	290,000,000
Other <sup>1</sup> .....	50	25,000	7,500,000
Service associations.....	602	369,200	12,356,000
Rooms and/or meals.....	180	18,500	2,700,000
Housing.....	60	2,700	<sup>2</sup> 1,600,000
Medical and/or hospital care:			
On contract.....	55	100,000	1,500,000
Own facilities.....	20	51,000	2,500,000
Burial: <sup>3</sup>			
Complete funeral.....	36	35,500	300,000
Caskets only.....	6	1,500	6,000
Other <sup>4</sup> .....	245	160,000	3,750,000
Electricity associations <sup>5</sup> .....	850	<sup>6</sup> 1,149,700	60,960,000
Telephone associations <sup>7</sup> .....	5,000	330,000	5,485,000
Credit unions <sup>8</sup> .....	8,882	2,838,034	210,885,783
Insurance associations.....	2,000	<sup>9</sup> 10,550,000	200,000,000
<i>Federations<sup>10</sup></i>			
Wholesales:			
Interregional.....	1	20	6,755,900
Regional.....	23	3,649	<sup>11</sup> 160,400,000
District.....	11	234	<sup>11</sup> 11,217,661
Service federations.....	22	1,500	8,250,000
Productive federations.....	15	195	20,013,000

<sup>1</sup> Such as consumers' dairies, creameries, bakeries, propane gas associations, fuel yards, and lumber yards.<sup>2</sup> Gross income.<sup>3</sup> Local associations only; does not include associations of federated type (which are included with service federations) or funeral departments of store associations.<sup>4</sup> Such as cold-storage, water-supply, laundry and dry-cleaning, recreation, printing and publishing, etc., associations.<sup>5</sup> Data are for 1944.<sup>6</sup> Number of patrons.<sup>7</sup> Data are for 1936.<sup>8</sup> Actual figures; not estimates.<sup>9</sup> Policyholders.<sup>10</sup> Figures do not in all cases agree with those in tables 2 and 3, for the reason that table 1 includes an allowance for nonreporting associations; tables 2 and 3 relate to reporting associations only.<sup>11</sup> Includes wholesale, retail, and service business; for own production, see table 3.

Table 2 summarizes the activities of the various central commercial organizations in the consumers' cooperative movement which reported.

TABLE 2.—Summary of Activities of Reporting Cooperative Distributive, Service, and Productive Federations in 1945

Item	All federations	Wholesales			Service federations	Productive federations
		National	Regional	District		
Number of federations reporting.....	57	1	21	11	13	11
Number of member associations.....	(1)	20	3,585	241	1,177	187
Amount of business.....	\$194,019,411	\$6,755,900	\$157,416,005	\$11,217,941	\$540,865	\$18,088,700
Wholesale distributive.....	167,806,389	6,755,900	149,952,392	<sup>2</sup> 11,095,097		
Service.....	4,285,897		3,625,189	119,844	540,865	
Retail distributive.....	3,838,424		3,838,424	(2)		
Value of own production.....	60,577,789	1,898,000	42,476,831	797,873		15,405,085
Net earnings, all departments.....	9,258,031	27,266	9,125,458	273,740	23,681	<sup>4</sup> 202,114
Patronage refunds, all departments.....	7,366,425	27,266	6,869,737	235,340	14,062	220,000

<sup>1</sup> Membership cannot be totaled, as some local associations are members of several federations.<sup>2</sup> Includes some retail business.<sup>3</sup> Included with wholesale business.<sup>4</sup> Loss.

*Service Business*

Service business for the associations reporting for 1945 totaled \$4,285,897, of which an overwhelming proportion (84.6 percent) was done by the regional wholesales. Service federations and district wholesales accounted for 12.6 and 2.8 percent, respectively.

Business done in the different types of service rendered by wholesales and by service federations in 1945 is shown in the accompanying statement.

	Wholesale service departments	Service federations
All types of service.....	\$3, 745, 033	\$540, 865
Funeral service.....	40, 913	112, 270
Automobile repair.....	97, 337	-----
Recreation.....	4, 846	-----
Insurance, bonds, etc.....	61, 083	185, 000
Auditing, accounting, etc.....	73, 770	93, 813
Financing and credit.....	68, 702	61, 710
Management, business advice, and planning.....	60, 585	-----
Transport (truck, tugboat, pipeline, and tank car).....	3, 032, 222	71, 660
Millwright service.....	3, 029	-----
Printing.....	-----	16, 412
Other (not specified).....	302, 546	-----

*Cooperative Production*

Cooperative production totaled \$60,577,789, of which the largest proportion (70.2 percent) came from the productive departments of the regional wholesales and 25.4 percent from productive federations owned jointly by varying numbers of the regional wholesales. Goods produced by National Cooperatives and by district wholesales accounted for 3.1 and 1.3 percent of the total, respectively.

Reflecting the cumulative acquisition of oil-bearing land and petroleum refineries during the past few years, petroleum products accounted for the largest output in 1945 (52.3 percent of the total). The next group was that including feed, seed, and fertilizer (37.1 percent). Food products, although increasing somewhat over 1944, nevertheless declined in relation to total cooperative production, accounting for only 3.5 percent in 1945 as compared with 4.2 percent in the preceding year.

The value of goods produced in 1945 as compared with the two preceding years, by commodity groups, is shown in table 3.

TABLE 3.—*Production by Central Cooperatives in 1945, as Compared With 1944 and 1943, by Commodity Groups*

Commodity group	1945				1944: Total		1943: Total	
	Total		Departments or subsidiaries of wholesales	Productive federations	Amount	Per cent	Amount	Per cent
	Amount	Per cent						
All products.....	\$60,577,789	100.0	\$45,172,704	\$15,405,085	\$48,999,183	100.0	\$29,431,499	100.0
Food products.....	2,120,517	3.5	1,955,310	165,207	2,073,462	4.2	1,958,036	6.6
Chemical products.....	40,000	.1	40,000		38,000	.1		
Coal.....	59,610	.1	59,610		29,274	.1		
Crude oil.....	1,438,027	2.4	1,438,027		721,050	1.5	31,340	.1
Refined petroleum products.....	25,852,711	42.7	20,253,886	5,598,825	21,165,002	43.2	6,743,901	22.9
Lubricating oil.....	4,369,325	7.2	4,369,325		4,659,465	9.5	1,358,479	4.6
Grease.....	183,023	.3	183,023		226,374	.5	223,864	.8
Printing.....	249,239	.4	80,732	168,507	192,793	.4	326,959	1.1
Paint.....	71,380	.1	71,380		81,689	.2	1,351,782	4.6
Lumber and shingles.....	693,598	1.1	40,213	653,385	1,361,866	2.8	360,502	1.3
Poultry and poultry products.....	321,306	.5	321,306		369,296	.8	246,247	.8
Insecticides.....	142,714	.2	142,714		98,034	.2	( <sup>1</sup> )	( <sup>1</sup> )
Feed, seed, and fertilizer.....	22,503,054	37.1	14,344,567	8,158,487	16,102,495	32.9	16,781,157	57.1
Farm machinery.....	2,473,036	4.1	1,858,000	615,036	1,868,809	3.8		
Other.....	60,249	.1	14,611	45,638	11,574	( <sup>2</sup> )	49,232	.2

<sup>1</sup> No data.<sup>2</sup> Less than 0.1 of 1 percent.

Although the wholesales have generally found production a profitable field, in 1945 some of the productive federations sustained heavy losses. Of 11 federations reporting, 7 had combined earnings of \$259,556. However, because of the losses of the other 4, amounting to \$461,670, the whole productive-federation group showed a net loss of \$202,114. Earnings, for the federations that had such, amounted to 3.1 percent on their total business; for those "in the red," losses were at the rate of 6.5 percent. Of 7 federations for which data are available for both 1944 and 1945, 2 had a loss in both years, 2 which made a gain in 1944 sustained a loss in 1945, 2 had larger earnings in 1945 than in 1944 and 1 had smaller earnings.



## Labor Laws and Decisions

### State Labor Legislation in 1946<sup>1</sup>

IN 1946, as in 1945, the spotlight on labor legislation was centered in the field of industrial relations. However, laws on this subject were enacted in only four States and Puerto Rico. In most cases, the legislation was of the restrictive type. On the other hand, the Puerto Rico industrial relations law was amended so as to make it conform more closely to the National Labor Relations Act.

Eleven States,<sup>2</sup> Alaska, and Puerto Rico held regular legislative sessions during the year. Labor laws were enacted in all of these States, with the exception of Mississippi, and in some instances were of outstanding importance. Special sessions of the legislature were held in a number of other States, but in only one of these (California) was any labor legislation passed.

Significant advances were made in workmen's compensation laws. In Alaska, Kentucky, and Virginia, the laws were changed from elective to compulsory. The new Alaska law also did away with the unsatisfactory system of court administration, which was replaced by administration under a commission. Second-injury funds were established in Alaska and Kentucky, and in Georgia a new occupational disease law was enacted.

Workers unable to carry on their duties because of physical or mental injury or illness will be protected by the new California Disability Insurance Act, which is somewhat similar to the Rhode Island act of 1942.<sup>3</sup> In New Jersey, the State commission on postwar economic welfare was directed to make a study of the establishment of an unemployment compensation fund and a system of unemployment sickness benefits and report to the legislature.

Progress also was made during the year in child-labor laws in a few States, particularly in Georgia where the law was completely revised. Two laws were passed by the New York Legislature for the benefit of migratory workers, and in Massachusetts a law was enacted broaden-

<sup>1</sup> Prepared in the Division of Labor Standards, U. S. Department of Labor, by Alfred Acee.

<sup>2</sup> Georgia, Kentucky, Louisiana, Massachusetts, Mississippi, Missouri, New Jersey, New York, Rhode Island, South Carolina, and Virginia.

<sup>3</sup> For a detailed report on disability compensation in California, see *Monthly Labor Review*, August 1946 (p. 236).

ing the coverage of minimum wage legislation to include men. Following the example set by Massachusetts in 1945, Rhode Island enacted a law which prohibits wage differentials based on sex.

### *Industrial Relations*

A special law was enacted in New Jersey governing the industrial relations of public utilities. It guarantees labor the right to organize and bargain collectively, free from interference or coercion by employers. The State board of mediation is authorized to settle controversies concerning collective-bargaining representation and the rights of employees of a particular class or craft to vote in elections for representatives.

Collective-bargaining agreements with public utilities are required to run for a minimum of 1 year from the date of execution, and must continue in force from year to year thereafter unless the parties specify to each other in writing any changes desired. If no agreement as to the terms of a new contract is reached within 5 days after the termination date of the old contract, a public-hearing panel is set up to hold public hearings on disputes and to make recommendations to the Governor. The Governor is empowered to seize and operate any utility for the duration of the dispute in the event of a strike or lock-out or if either of the parties fails to abide by the panel's decision and thereby threatens interruption of service.

The Puerto Rico Labor Relations Act was amended to make it conform more closely to the pattern of the National Labor Relations Act and the "Little Wagner Acts" of Connecticut, New York, Rhode Island, and Utah. All provisions relating to mediation, conciliation, and arbitration were deleted from the act. The law specifically authorizes the check-off and permits maintenance-of-membership agreements.

Under the amended act it is now an unfair labor practice on the part of an employer to fail to remain neutral before or during an election, to fail to reinstate an employee discharged in violation of the act, and to discriminate against a supervisor for refusal to commit an unfair labor practice on behalf of the employer. It is also made an unfair labor practice on the part of a labor organization to exclude employees from membership unjustifiably in a unit where the union has signed an all-union or maintenance-of-membership agreement. The Puerto Rico Labor Relations Board is authorized in such cases to suspend or terminate the agreement.

A further new provision requires employer associations to register and file copies of all contracts with the board. This requirement formerly applied only to labor unions. Although the board no longer

has any authority over mediation, conciliation, and arbitration, the new law empowers the board to aid in the enforcement of arbitration awards.

Another Puerto Rico act establishes in the department of labor a labor organizations accounting service to furnish facilities and personnel to labor organizations for the establishment and maintenance of efficient accounting books and systems, and to verify such accounts at the request of labor organizations. All union books, accounts, and registers are to be kept confidential. A law was also enacted providing that all labor organization funds and possessions shall be exempt from attachment in actions connected with labor disputes.

The New York Labor Relations Act was amended to extend coverage to employees of charitable, educational, and religious associations who perform services in connection with the operation of a building owned and operated by such an organization for private profit. In view of the large property holdings of such organizations in New York, many additional workers will hereafter be protected by the State labor relations act.

As a means of bringing about the settlement of labor disputes, the State Mediation Board of New York was authorized to engage in voluntary arbitration if the consent of all the parties to a dispute is obtained. The membership of this board was increased from five to seven persons. All employees of the board are now required to be appointed through civil service. In cases affecting the public interest and welfare, the board is empowered to appoint special mediators having the authority of board members.

Activities of labor unions were restricted in Louisiana. Under this act, certain types of picketing are prohibited and it is made unlawful for any person to engage in violence, intimidation, or unlawful destruction of property in connection with a labor dispute. It is further declared to be against public policy for any employee or labor organization to strike in violation of an existing collective-bargaining agreement if the strike is not approved in advance by the labor organization. Injunctions may be issued to enforce the provisions of the act.

The Louisiana law also forbids unions to join with employers or other nonlabor groups to fix prices, eliminate competition, or otherwise act in restraint of trade. In addition to the provisions authorizing enforcement of the act by injunctive order, violations of the law are made a misdemeanor, punishable by a fine up to \$500, imprisonment for 90 days, or both.

In Virginia a law was enacted regulating picketing and other activities of labor unions. This act prohibits interference or attempted interference by any person with the right of another to work, and the

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use of threats or intimidation, or insulting or threatening language to induce or attempt to induce any person to quit his employment or to refrain from seeking employment. The law specifically forbids picketing by force or violence, picketing which interferes with the entrance or the exit of any premises or the free use of public streets or sidewalks, and picketing by any person not employed at the time of picketing or immediately prior to the strike by the business or industry picketed. Violations of this act are made a misdemeanor.

In addition, under a joint resolution passed by the Virginia Legislature, it is made contrary to public policy for any State, county, or municipal official to recognize or negotiate with any labor union representing public employees. However, this act does not prohibit public employees from forming unaffiliated organizations, which do not claim the right to strike, for the purpose of discussing employment conditions.

### *Discrimination in Employment*

Massachusetts enacted a fair employment practice law which is quite similar to the New York law passed in 1945. It applies to employers of six or more persons, but specifically exempts domestic employers, social clubs, and fraternal, charitable, educational, and religious nonprofit organizations. A fair employment practice commission was established to administer the act.

Like the New York act, the Massachusetts law forbids an employer, because of race, color, religious creed, national origin, or ancestry, to refuse to hire, to discharge, or to discriminate against any person in compensation, or in terms or privileges of employment. Similarly, a labor organization may not exclude or expel from membership or discriminate against its members or any employer for these reasons.

The commission is authorized to hold hearings, to attempt to eliminate complaints regarding unlawful employment practices by conciliation, to issue orders requiring violators to cease and desist from such practices, and to take other affirmative action. Review and enforcement of commission orders by the courts are provided through procedure similar to that under the State labor relations act.

### *Child Labor*

Probably the most important development in the child-labor field was in Georgia, where a new child-labor law was enacted. This act raises from 14 to 16 years the minimum age for work at any time in mills, factories, laundries, manufacturing establishments, and workshops. It also establishes a 16-year minimum age during school hours and a 14-year minimum outside school hours for any gainful occupa-

tion, except that under certain conditions boys 12 or 13 may work outside of school hours in wholesale or retail stores. A maximum 8-hour day, 40-hour week, for minors under 16 in any gainful occupation also was established. The act does not apply to work in agriculture or domestic service in private homes.

Massachusetts for the first time regulated the hours and conditions of labor of minors on farms by specifying that no minor under 14 years of age shall be employed on a farm for more than 4 hours a day or 24 hours a week except on a farm owned or operated by a relation by blood or marriage. This act also prohibits the employment of any minor under 16 in the operation of certain saws except on the farm of a relation by blood or marriage.

California repealed the Minor's Emergency War Employment Act, under which some relaxations were permitted. The New Jersey Legislature passed a bill to repeal the law permitting the temporary release of children 14 and 15 from school for farm work, but this bill was vetoed by the Governor. The New York Legislature extended until July 1, 1947, the act permitting children of 14 and 15 to leave school for agricultural work and children of 16 and over to leave school for work in canneries, greenhouses, and milk plants, for a period of 30 days during the year.

### *State Labor Departments*

A new department of industrial relations was established in Missouri. This department is to be administered by an industrial commission composed of three members, one to represent employers, one to represent employees, and the third to represent the public. Several divisions were established to administer different types of labor laws. The act assigns to the commission all powers, duties, and responsibilities previously vested in the workmen's compensation commission and the unemployment compensation commission. The industrial commission is authorized to approve and disapprove all rules and regulations promulgated by any division of the department.

In Kentucky, an employment service commission was established in the department of industrial relations. This commission is composed of a director of employment service, one member to represent labor, and one to represent management. The act establishing this commission provides for a State advisory committee and local advisory committees composed of representatives of labor and management and the public. The employment service commission is directed to establish and maintain free public offices.

The Virginia law, specifying that the commissioner of labor shall serve for a term of 4 years, was amended to provide that he shall serve at the pleasure of the Governor.

### *Safety and Health*

The most important development in the field of safety and health legislation was in Rhode Island, where an industrial code commission was established in the department of labor. This commission is authorized to make codes for the prevention of accidents and occupational diseases. These codes will have the force and effect of law upon approval by the director of labor. The codes must be consistent with specified nationally accepted safety codes.

The Kentucky law was made more effective by permitting the commissioner of industrial relations to file a complaint with the industrial safety board concerning any unsafe working place or condition which has not been made safe in accordance with his orders for correction. The industrial safety board in such cases is required to give notice of any hearing to employees and their representatives as well as to the employer.

### *Migratory Labor*

The health and welfare of migratory workers were safeguarded by two laws passed in New York. One of these acts requires every person who employs, recruits, transports, or brings into the State 10 or more out-of-State migrant farm or food-processing workers to register with the industrial commissioner and submit facts on the wages, housing, and working conditions of these workers. The other act provides that, when a district State health officer finds that a violation of the public health law or sanitary code exists in any labor camp within his jurisdiction and any such violation continues after notice and demand for its discontinuance, the health officer may, with the approval of the commissioner of health, institute proceedings to enjoin the operations of the camp.

### *Wages*

In Massachusetts a law was enacted broadening the coverage of minimum wage legislation to include men. This makes a total of four States—Connecticut, Massachusetts, New York, and Rhode Island—which now apply minimum wage laws to men as well as to women and minors. Wage-and-hour bills, patterned generally after the Fair Labor Standards Act, were introduced in several States, but none has become law.

In Rhode Island a law was enacted which prohibits wage differentials based on sex for work of comparable character or work on comparable operations. This is similar to a Massachusetts law enacted in 1945.



## *Workmen's Compensation*

### COVERAGE OF PERSONS AND EMPLOYMENTS

The workmen's compensation law of Alaska was completely reenacted and provides for compulsory coverage of all employers having three or more employees. The former law provided for elective coverage for employers having five or more employees. The Kentucky workmen's compensation law was also changed from elective to compulsory for employers of three or more persons engaged in certain hazardous employments. In Virginia the workmen's compensation act was amended to require compulsory coverage for all employers having seven or more employees.

Another Kentucky law provides that every employer who employs three or more persons in a hazardous occupation and who fails to elect to operate under the law, must file with the department of industrial relations an indemnity bond or insurance policy insuring the payment of any judgment obtained by an employee or his dependents for damages resulting from personal injuries or death by accident arising out of and in the course of employment. This law was enacted in order to protect employees engaged in hazardous occupations in the event the new compulsory law should be held to be unconstitutional. Owing to previous holdings of the Kentucky courts, there is some doubt as to whether the new statute will be upheld.

In New York coverage is now provided for domestic workers if employed by the same employer for a minimum of 48 hours per week in cities and villages having a population of 40,000 or more. Such employers, however, are not subject to criminal penalties for failure to provide insurance as is the case with other employers coming under the compulsory provisions of the law.

### SECOND-INJURY FUNDS

Second-injury funds were established in Alaska and Kentucky. Such legislation has now been enacted in 33 States, Alaska, the District of Columbia, Hawaii, and Puerto Rico, and under the Federal Longshoremen's Act.

The purpose of these funds is to encourage greater utilization of handicapped workers in industry. In the past many employers hesitated to employ physically disabled persons, lest they incur subsequent injuries and thus increase workmen's compensation cost. By the establishment of second-injury funds, employers are relieved of at least part of the cost of total disability resulting from a second injury, and the employment of handicapped workers, including war veterans, is facilitated.

Coverage under both of these new laws is not limited to cases involving the loss of specific members of the body as recommended by the International Association of Industrial Accident Boards and Commissions. One interesting feature of the Kentucky law is that diseases are covered only if contracted by the employee while a member of the armed forces of the United States and sustained in line of duty while the United States was engaged in war.

#### MEDICAL BENEFITS

In Kentucky medical services are now authorized for an unlimited period in place of the previous limitation of 90 days. The maximum amount allowed for such services was increased from \$200 to \$400. Formerly the workmen's compensation board was authorized to increase the allowance up to \$400. In Massachusetts unlimited medical aid is also authorized from the date of the injury, but subject to the approval of the department of industrial accidents. Formerly there was a limitation of 2 weeks which might be extended by the department in unusual cases or in cases requiring specialized or surgical treatment.

#### INCREASED BENEFITS

The level of benefit payments was raised in California, Kentucky, Massachusetts, New York, and Virginia. In California the maximum weekly benefit for permanent disability was increased from \$25 to \$30 a week. However, this law is effective only until the ninety-first day after the final adjournment of the next legislature.

In Kentucky the maximum weekly benefits in death cases were increased from \$12 to \$15, and the total maximum from \$4,800 to \$6,000. The maximum weekly benefits for total disability were raised from \$15 to \$18, and the total maximum from \$7,500 to \$9,000. The period of compensation for temporary partial disability was extended from 333 weeks to 420 weeks, and the total maximum was raised from \$4,000 to \$5,000. The maximum weekly compensation for scheduled injuries resulting in permanent partial disability was also increased from \$12 to \$15. The law provides that, in cases of permanent partial disability not listed in the schedule, compensation shall be payable for 425 weeks instead of 335 weeks, with the total maximum increased from \$4,000 to \$5,000.

In Massachusetts the maximum weekly compensation for disability was increased from \$22 to \$25 and the total maximum from \$7,500 to \$10,000. However, this maximum does not apply to total permanent disability, which may be compensated for life but at a lower rate after \$10,000 has been paid. The minimum weekly compensation for total disability was increased from \$15 to \$18.

The New York law was amended to increase the maximum for disability resulting from injuries occurring after June 1, 1946, from \$25 to \$28 per week and to raise the minimum (except for permanent total disability) from \$8 (or actual wage, if less) to \$12 (or actual wage, if less) per week. The law also increased the maximum weekly wage on which death benefits are based where death occurs after June 1, 1946, from \$162.50 to \$182.00 per month and the minimum wage from \$75 to \$78 per month.

In Virginia the workmen's compensation law was amended to provide that compensation in disability and death cases shall be at the rate of 60 percent of the average weekly wage, instead of 55 percent. The maximum weekly benefits were increased from \$18 to \$20. The total maximum payable in cases of disability was increased from \$7,000 to \$7,800 and in death cases from \$6,000 to \$6,600.

#### OCCUPATIONAL DISEASES

The workmen's compensation law of Georgia was amended to provide compensation for disability or death from specified poisonings, from diseased condition caused by exposure to X-rays or radioactive substances, and from asbestosis and silicosis. The amendment provides that compensation for occupational diseases shall be paid on the same basis as for accidental injuries, except that there shall be no compensation for the partial loss or loss of use of a member or vision of an eye. There are special limitations on the compensation payable in the case of silicosis or asbestosis.

In New York the aggregate amount payable in the case of silicosis or other industrial disease for permanent total disability or death was increased from \$6,500 to \$7,000.

#### ADMINISTRATION

Under the revised workmen's compensation law of Alaska, an industrial board composed of the insurance commissioner, the attorney general, and the commissioner of labor, who is to be the chairman and executive officer, was established to replace court administration. The law sets up the method by which claims for compensation are to be determined and provides that hearings may be held by any or all of the members of the board. The award of the board is conclusive as to all questions of fact, and appeals are allowed only on questions of law.

A major change was also made in the administration of the workmen's compensation law in Missouri because of the creation of the new department of labor and industrial relations. The law is now to be administered by a division of workmen's compensation in the new department of labor and industrial relations. In Massachusetts the number of members of the industrial accident board was increased from seven to nine.

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## Legislative Sessions in 1947

IN 1947 regular legislative sessions will be held in 44 States—all except Kentucky, Louisiana, Mississippi, and Virginia. The legislatures of Alaska, Hawaii, and Puerto Rico will also meet. Most State legislatures hold biennial sessions and assemble in odd-numbered years. In Massachusetts, New Jersey, New York, Rhode Island, and South Carolina, the legislatures meet annually.

With few exceptions the State legislatures meet in January. The Alabama Legislature convenes on May 6, but a preliminary session for general organization is held for 10 days, beginning January 14. In Florida the date of convening is April 8. The Georgia Legislature is scheduled to meet in regular session on July 14, but a special session is held on the second Monday in January for the election of officers and the introduction of bills, and at that time the date of the regular session may be changed. In practice, the regular session immediately follows the preliminary January session.

In 15 States the length of the session is limited. The usual time limit is 60 days, but in Maryland and Minnesota it is 90 days, while in Wyoming the legislature must adjourn after 40 days. In some of the States where there is no limit on the length of the session, the pay of legislators ceases after the session has extended beyond a specified period.

The Eightieth Congress will convene on January 3, 1947.

The following table shows for each State the date the legislature meets and the length of the session.

*Dates Set by Law for Convening of State Legislatures*

State	Time of assembly	Date of convening 1947 session	Length of session
Alabama.....	Second Tuesday in January <sup>1</sup> .....	Jan. 14	60 days.
Arizona.....	Second Monday in January.....	Jan. 13	No limit. <sup>2</sup>
Arkansas.....	do.....	do.....	60 days. <sup>3</sup>
California.....	Monday after first day in January.....	Jan. 6	No limit. <sup>4</sup>
Colorado.....	First Wednesday in January.....	Jan. 1	Do.
Connecticut.....	Wednesday after first Monday in January.....	Jan. 8	5 months.
Delaware.....	First Tuesday in January.....	Jan. 7	No limit. <sup>5</sup>
Florida.....	Tuesday after first Monday in April.....	Apr. 8	60 days.
Georgia.....	Second Monday in January <sup>1</sup> .....	Jan. 13	Do.
Idaho.....	First Monday after January 1.....	Jan. 6	No limit. <sup>2</sup>
Illinois.....	Wednesday after first Monday in January.....	Jan. 8	Do.
Indiana.....	Thursday after first Monday in January.....	Jan. 9	61 days.
Iowa.....	Second Monday in January.....	Jan. 13	No limit.
Kansas.....	Second Tuesday in January.....	Jan. 14	Do.
Maine.....	First Wednesday in January.....	Jan. 1	Do.
Maryland.....	do.....	do.....	90 days.
Massachusetts.....	do.....	do.....	No limit.
Michigan.....	do.....	do.....	Do.
Minnesota.....	Tuesday after first Monday in January.....	Jan. 7	90 days.
Missouri.....	Wednesday after January 1.....	Jan. 8	No limit.
Montana.....	First Monday in January.....	Jan. 6	60 days.

See footnotes at end of table.

## Dates Set by Law for Convening of State Legislatures—Continued

State	Time of assembly	Date of convening 1947 session	Length of session
Nebraska.....	First Tuesday in January.....	Jan. 7	No limit.
Nevada.....	Third Monday in January.....	Jan. 20	60 days.
New Hampshire.....	First Wednesday in January.....	Jan. 1	No limit.
New Jersey.....	Second Tuesday in January.....	Jan. 14	Do.
New Mexico.....	do.....	do	60 days. <sup>4</sup>
New York.....	Wednesday after first Monday in January.....	Jan. 8	No limit.
North Carolina.....	do.....	do	Do. <sup>3</sup>
North Dakota.....	Tuesday after first Monday in January.....	Jan. 7	60 days.
Ohio.....	First Monday in January.....	Jan. 6	No limit.
Oklahoma.....	Tuesday after first Monday in January.....	Jan. 7	Do. <sup>6</sup>
Oregon.....	Second Monday in January.....	Jan. 13	No limit. <sup>7</sup>
Pennsylvania.....	First Tuesday in January.....	Jan. 7	Do.
Rhode Island.....	do.....	do	Do. <sup>2</sup>
South Carolina.....	Second Tuesday in January.....	Jan. 14	No limit. <sup>8</sup>
South Dakota.....	Tuesday after first Monday in January.....	Jan. 7	60 days.
Tennessee.....	First Monday in January.....	Jan. 6	No limit. <sup>9</sup>
Texas.....	Second Tuesday in January.....	Jan. 14	Do. <sup>10</sup>
Utah.....	Second Monday in January.....	Jan. 13	60 days.
Vermont.....	Wednesday after first Monday in January.....	Jan. 8	No limit.
Washington.....	Second Monday in January.....	Jan. 13	60 days.
West Virginia.....	Second Wednesday in January.....	Jan. 8	Do. <sup>3</sup>
Wisconsin.....	do.....	do	No limit.
Wyoming.....	Second Tuesday in January.....	Jan. 14	40 days.
United States Congress.....	January 3.....	Jan. 3	No limit.

<sup>1</sup> Meets for organization. Regular session will be held on May 6.

<sup>2</sup> Pay of legislators limited to 60 days.

<sup>3</sup> The session may be extended by a two-thirds vote.

<sup>4</sup> There is a recess of approximately 30 days between the period in which bills are introduced and the period in which action is customarily taken.

<sup>5</sup> Meets for organization and fixes a time for regular legislative session, usually several days thereafter.

<sup>6</sup> Pay of legislators reduced after 60 days.

<sup>7</sup> Pay of legislators limited to 50 days.

<sup>8</sup> Pay of legislators limited to 40 days.

<sup>9</sup> Pay of legislators limited to 75 days.

<sup>10</sup> Pay of legislators reduced after first 120 days.

Recent Decisions of Interest to Labor<sup>1</sup>*Fair Labor Standards Act*

**MAINTENANCE**, repair, and expansion of plant facilities and roads.—Employees of a construction company are engaged in the production of goods for commerce if they maintain, enlarge, or repair existing interstate manufacturing plants. They are also engaged in commerce when they repair and improve highways in industrial areas used by many plants for shipping goods in interstate commerce.<sup>2</sup>

The litigation in this case originally covered over 50 contracts classified under 6 heads. The Circuit Court of Appeals considered 4 of these, as follows: (1) Public highways, roads, and bridges; (2) tele-

<sup>1</sup> Prepared in the Office of the Solicitor, U. S. Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law nor to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached, based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

<sup>2</sup> *Walling v. McCrady Construction Co.*, C. C. A. 3, July 23, 1946.

phone facilities; (3) railroad facilities; and (4) industrial plant facilities. The other 2 matters were conceded to be within the statute.

The appellant contended that employees working under road, telephone, and railway contracts were not intended to be covered by the act, and based this contention on the absence of any specific reference in the legislative history of the act to these activities, claiming that this exclusion itself was indicative of Congressional intention not to interfere with such matters as they were within the scope of local governments.

The court held that the work of the removal and replacement of paving, sidewalk construction, relocation of county roads, construction of new bridges and relocation of old ones, were all vital to the transportation of goods in interstate commerce. Without the servicing of these roads and bridges, interstate commerce could not be carried on effectively. Reviewing the cases of *Pedersen v. Fitzgerald Co.* (318 U. S. 740), *Ritch v. Puget Sound Bridge & Dredging Co., Inc.*<sup>3</sup> (— F. (2d) —), and *Overstreet v. North Shore Co.* (318 U. S. 125), the court found that the employer's repair work was vital to the functioning of interstate highways, telephones, and railroad facilities. The "new construction" of a conduit and signal tower were also held to be so closely allied with existing systems as to be a vital part of commerce, even though not in themselves "reconstruction."

In the Fair Labor Standards Act the term "commerce" could not be limited to the interpretation of this phrase in the Federal Employers' Liability Act, as argued by the employer. The subject matter, type of regulations, and purposes of the Fair Labor Standards Act "are all opposed to such restriction."

Discussing next the new construction of buildings for the expansion of an existing plant engaged in the production of goods for commerce, the court again rejected the employers' argument that the men building these projects were not "necessary to the production" of goods for interstate commerce. The projects were all an integral part of existing plants and their construction was for the purpose of furthering the interstate commerce operations of the plant.

*Storing interstate commerce goods with intrastate does not change interstate character.*—Purchases of goods outside the State, by a retail store, to be kept in the retail store until needed and then sent to the store's retail outlets within the State, constitutes a single flow of goods from the seller to the retail outlet, even though such goods are temporarily stored with intrastate goods.<sup>4</sup>

The United States District Court, in a suit for recovery of overtime wages, denied the employer's defense that (1) he was not engaged in

<sup>3</sup> Discussed in Monthly Labor Review, August 1946 (p. 251).

<sup>4</sup> *Collier v. New River and Pocahontas Consolidated Coal Co.*, U. S. D. C., S. D. W. Va., May 31, 1946.



commerce or the production of goods for commerce; (2) if so engaged, his employee was not covered by the act because he worked in a "local retailing capacity"; and (3) that he was exempt from the act because he operated a retail business, the greater part of whose services were intrastate.

The policy of the company, operating one large and several small stores, all within the State, was to do all ordering through the large store. This store anticipated the needs of the others and ordered accordingly, keeping all merchandise in its warehouse, whether bought within or without the State. This stock was used to fill the orders of the other stores. The court held that such goods did no more than rest temporarily in the large stockroom before going to their final destination, and their trip did not end at the warehouse. Doing such wholesale business for its other retail establishments, it could not itself be considered as a retail establishment exempt under section 13(a)(2) of the act. Therefore the employee, whose duties consisted of handling certain goods in the warehouse and sending them to the retail stores as needed, was "engaged in commerce" and entitled to overtime wages under the act.

*Office switchboard operator within the act.*—A switchboard operator employed by a corporation is covered by the Fair Labor Standards Act and does not come within the exemptions provided for public telephone operators under section 13(a)(11).<sup>5</sup>

The Supreme Court of Florida, affirming a lower court decision, denied the employer's contention that the employee was a switchboard operator in a public and not a private telephone exchange of less than 500 stations.

The corporation had been formed under the Florida laws for the purpose of carrying on a rural rehabilitation and resettlement program in one of the counties. The work was financed from grants, loans, and other activities. The corporation made grants of money and purchased homes and home sites for "homesteaders."

A handicraft shop was established to provide income, and articles made here were sold as souvenirs. The raw materials used were purchased, in part, outside the State. A private (PBX) switchboard was installed, connecting all offices throughout the project and having a connection also with the public telephone system in the county. Others, outside the project, had applied to the corporation for telephones, but their applications had been denied and the corporation had never sought a franchise to operate a public telephone system.

In making its determination, the court held that an important, if not controlling, element in determining whether a telephone system

<sup>5</sup> *Cherry Lake, Inc. v. Kearce*, Supreme Ct. of Fla., May 28, 1946.

was a public utility, was the willingness and intent to serve the entire public in the area. The essential feature of a public use is that it is not confined to privileged individuals and special groups, and the test is whether the general public has a legal right to the use.

The production of work through the handicraft shop, for interstate sale, brought the corporation within the act; and as the telephone system was an integral part of the whole plan, the telephone operator was entitled to the benefits of the act.

### Labor Relations

*Supervisors' bargaining rights upheld.*—In the first court test of the issue on the right of supervisory employees to organize as such and bargain collectively, the Sixth Circuit Court of Appeals upheld the National Labor Relations Board ruling in favor of the supervisors.<sup>6</sup>

In reaching its decision the court determined three questions: (1) Whether foremen were "employees" within the meaning of the National Labor Relations Act; (2) whether the Board should have placed in one bargaining group, supervisory employees of various levels; and (3) whether the union certified by the Board was qualified to represent the foremen in collective bargaining.

Reviewing previous Board decisions on this question, the court pointed out that the Board in *Matter of Maryland Dry Dock Co.* (49 NLRB 733) had denied foremen the right to organize and be represented by the same union as the rank-and-file employees. However, in the instant case, in which the foremen were represented by independent unions, the Board noted that the dangers feared in the *Maryland Dry Dock* case had not materialized. Determining that foremen, even though representatives of management for certain purposes, are "employees" within the meaning of the National Labor Relations Act, the court held they were entitled to bargain collectively. It adhered, however, to the principles stated in *Jones & Laughlin Steel Corp. v. National Labor Relations Board* (146 F. (2d) 718),<sup>7</sup> in which case the court recognized the dual character of plant guards but held that although the guards were employees for purposes of organization, they could not be organized by the union representing production employees because of the public functions the guards were compelled to perform.

The court then determined that foremen of various levels could properly be grouped in one unit. Determination of this matter was vested exclusively in the Board, and the court would not set the ruling aside as long as the Board acted reasonably. Many of the foremen's functions were performed interchangeably; their duties and privileges

<sup>6</sup> *National Labor Relations Board v. Packard Motor Car Co.*, C. C. A. 6, Aug. 12, 1946. Board decisions discussed in *Monthly Labor Review*, May 1945 (p. 1045) and February 1946 (p. 257).

<sup>7</sup> Discussed in *Monthly Labor Review*, February 1945 (p. 344), March 1945 (p. 597), April 1945 (p. 829) June 1946 (p. 923).

necessarily made them a group separate and distinct from rank-and-file employees; and their needs were needs common to their group.

The foremen were seeking to be represented by the Foremen's Association of America, an independent union. Since this union was neither affiliated with nor controlled by the union representing the rank-and-file employees, the situation was easily distinguishable from the *Jones & Laughlin* case, in which the guards sought to be represented by the union representing the production workers. The independence of the foreman's union being well assured, it was held to be a proper bargaining agent for the group, and the company was ordered to bargain with it.

*Duration of strike notice under War Labor Disputes Act.*—The District Court for Massachusetts held that an employees' strike notice filed according to the provisions of the War Labor Disputes Act did not lapse at the end of a 9-month period, since the strike was the result of the same issue as that existing at the time notice was first filed.<sup>8</sup>

The unions were certified by the National Labor Relations Board in 1944 to represent the employees, but the company refused to recognize and bargain with them. A strike notice was filed, and 2 months after the strike vote was taken, the employees stopped work. A settlement was reached after a couple of days and the employees returned to work. Almost 3 months after that, a new strike notice was filed, and a new strike vote taken, on the ground that the company refused to put the grievance procedure into effect. No strike was entered into, however, for nearly 5 months after the second vote and 9 months after the first. When the strike did take place, the company contended it was illegal because the unions should have filed another notice first.

Quoting from the legislative history demonstrating a Congressional intent not to impair the right to strike after the "cooling off" period and that the act was designed to prevent interruption of war production, the court held that the strike was not illegal and the unions were not subject to the civil liability provisions of the act. The court held that a new strike vote would be necessary "only if there had been a settlement of the labor dispute which caused the employees to strike. The pleadings, stipulation, and affidavits in this case conclusively show that there was no such settlement here, but that the plaintiff continued to refuse to recognize the union or to bargain with them." The original issue stated in the first ballot was an integral part of the second issue, because as long as the employer refused to recognize the union, the grievance procedures could not effectively be carried out.

<sup>8</sup> *Underwood Machinery Co. v. International Union, United Automobile, Aircraft & Agricultural Implement Workers, et al.*, U. S. Dist. Ct., Mass., Mar. 29, 1946.



### Reemployment

#### *Effect of sale of former employer's business on reemployment rights.—*

The sale of an employer's business while a former employee is in the armed services does not give that employee reemployment rights against the purchaser, who assumes none of the employer's obligations under the Selective Training and Service Act. The former employer, however, does have an obligation to the veteran.<sup>9</sup>

A veteran, prior to induction, had been employed by the defendant abrasive company, which had several divisions in its plant. During the veteran's service period, the division in which he had been employed was sold. Upon being discharged, the veteran made application to the new owner for reemployment, which was denied. He also applied to his former employer and was denied reemployment. He brought suit against both defendants.

Pointing out that the act imposes an obligation on the veteran's former employer only, the court denied his claim for employment by the purchaser in the absence of the purchaser's assumption of any obligations imposed on the former employer by the act.

However, since the former employer had continued operation of his other plants, the court held that the sale of one division was not, in itself, such a change of circumstances as to relieve the employer of his obligations to the veteran, even though the former position of the veteran no longer existed. To be relieved of this obligation the employer must prove the nonexistence of any position of like seniority, status, and pay in the other divisions of the company still being operated by him. Since this proof was lacking, the court reserved judgment pending submission of further evidence by the employer as to whether a similar position existed to which the veteran could be restored.

#### *Loss of reemployment rights by acceptance of position with purchaser.—*

When a veteran accepts a position with the purchaser of his former employer's business, who assumed no obligations as to reemployment of veterans, the relationship is that of master and servant and the act does not apply.<sup>10</sup>

The veteran had been employed as a cutter in his employer's tailoring shop prior to induction in the armed service. While in the service, the employer paid the veteran's wife \$20 a week as a good-will gesture to induce the veteran to return to his job. When the business was sold, he induced the purchaser to continue the payments, which the purchaser did until the veteran's discharge from the armed forces. The sale of the business included no obligations on the part of the

<sup>9</sup> *Sullivan v. West Co., Inc., & West Abrasives, Inc.*, U. S. D. C., E. D. Pa., Aug. 5, 1946.

<sup>10</sup> *Newman v. Finer*, U. S. D. C., So. D. Calif., June 21, 1946.

purchaser, and the seller agreed not to enter into a similar business in the county for a given period of time. After the veteran returned, he agreed to work for the purchaser at the same wages he had previously received. His failure to appear regularly at work and his attempts to help his former employer establish a business in competition with the purchaser, resulted in the veteran's dismissal within 1 year. The veteran sued for reinstatement and damages for loss of pay. The court held that the relationship was that of master and servant and that the payments to the veteran's wife had been merely an inducement to him to work there on his return. It was not an assumption of the employer's obligations, since the employer had not been obligated to make the payments but did so merely as a matter of business. The veteran, having divested himself of his rights under the act by accepting a position with someone other than his former employer, and having been discharged for ample cause, had no claim against the purchaser.

*Timeliness of veteran's application for reemployment.*—A veteran who requested release from the Army to enter essential civilian occupation and accepted such employment for 2 years, before applying to his former employer for reemployment, is not entitled to reemployment under the provisions of the Selective Service and Training Act.<sup>11</sup>

The veteran left his employer to enter the armed forces in 1942. Upon discharge at his own request, he entered essential industry, where he remained for 2 years. He then applied to his former employer for reemployment and was denied a job. This suit was brought on the ground that upon leaving the armed services, he had to stay in essential work or be subject to reinduction, and that therefore, his time for reapplying to his former employer began to run when he was no longer required to work in essential industry rather than from the date of his honorable discharge. The court, upholding his former employer's refusal to rehire him, held that the threat of reinduction was not a legal excuse for failing to apply for reemployment within the statutory period. Pointing out that Congress made a specific exception in the time limit only for veterans remaining in a hospital for 1 year after discharge, the court held that Congress had intended to protect only those unable to work and not those who could work but chose to take advantage of higher paying jobs before returning to their former employment.

*Temporary status of war workers inducted into armed services.*—Workers who entered into employment in war plants which had been greatly expanded to meet emergency demands must have realized that such employment was temporary and that they could not, after

<sup>11</sup> *Cox v. Boston Consolidated Gas Co.*, U. S. D. C. Mass., Aug. 30, 1946.

subsequent service in the armed forces, be permitted to demand reemployment rights under the Selective Training and Service Act.<sup>12</sup>

The Eastern District Court of New York, quoting from *Olin Industries, Inc., v. Barnett, et al.* (64 F. Supp. 722),<sup>13</sup> held that the term "temporary employment" included employment of workers in a company whose operations greatly expanded following 1939, entirely on account of extraordinary demands for war materials. In the present case, the employer had closed all but three or four of its war plants, and employment figures had dropped from a peak of 32,000 to about 9,000. Its buildings had been taken over in part by the United Nations, and employees were laid off in accordance with the seniority provisions of the union contract. Under these circumstances the employer was within his rights in laying off the reemployed veterans within 1 year of their reinstatement.

*Position of like seniority, status, and pay dependent on circumstances of case.*—An employer is not under obligation to reemploy a veteran at the same place of employment at which he was employed prior to induction, except when employing him in another place at the same level would result in substantial loss to the veteran.<sup>14</sup>

In this case the veteran, prior to induction, had been manager of a branch office on a salary and commission basis. Upon applying for reemployment, he was offered his choice of two other branches, not yet established, in other cities. The veteran brought suit for his former position in the office he had left. The employer contended that reemployment in exactly the same place was not mandatory, and that to offer him a job as manager somewhere else, particularly since it was a custom to rotate managers, satisfied the provisions of the act. The employer also relied on a 5-year contract with the manager employed during the veteran's absence. The court held that, even though the employer was under obligation to a third person by reason of a valid contract, he could not, by such agreement, abrogate the statutory rights of the veteran. In determining this case, the court pointed out that reemployment in exactly the same place was not mandatory in every case but would be determined according to circumstances, and that, when a substantial loss would result from reemployment in a different place, the veteran would be protected.

### *Decision of National Labor Relations Board*

*Illegal strikers eligible to vote in election.*—In the case of *Worcester Woolen Mills Corp.* (69 NLRB No. 51), the Board ruled that employees engaged in an unlawful strike were eligible to vote in an

<sup>12</sup> *Gaultieri v. Sperry Gyroscope Co., Inc.*, U. S. Dist. Ct., E. D. N. Y., July 5, 1946.

<sup>13</sup> Reported in *Monthly Labor Review*, April 1946 (p. 618).

<sup>14</sup> *Salter v. Becker Roofing Co.*, U. S. D. C., Middle Dist., Ala., May 17, 1946.



election, as the company had laid them off, following the strike, only because of lack of work.

The company, before the election, agreed to reinstate all employees on strike. Five of them whose eligibility was later challenged by the company were found to have been laid off because of lack of work, but they had been at work on the day of the election. The company then contended that they had struck illegally and should not have been permitted to vote. Treating this last contention as an "after-thought" of the company, the Board ruled that, assuming it to be so, the employees would still have been eligible to vote because the company had taken no affirmative steps to discharge them. During the walk-out and the subsequent strike, and after the settlement, the company had taken no overt action to discharge the strikers. Thus, since they were employed on the eligibility date and the election date, their votes were not later subject to challenge.

### State Court Decisions

*Union liable for unfair practices of its members while picketing.*—The Circuit Court of Wisconsin, upholding an order of the Wisconsin Employment Relations Board, held that under the State Employment Peace Act, union members who engage in mass picketing in an unlawful manner are guilty of unfair labor practices, and the union is responsible for such actions by its members even though the members acted contrary to their officers' instructions.<sup>15</sup>

During a strike at an employer's plant, pickets, although they had been ordered by union officials to carry on their picketing in a peaceful and lawful manner, nevertheless, used force to prevent employees from entering the plant, and forcefully evicted certain employees already within the plant. Ingress and egress were denied to all who did not have union identification passes and to some with such passes. The company filed a petition with the board, and, following a hearing, the board found that the pickets had forcefully ejected employees, had denied entrance to those legally entitled to admission to the plant property, and had denied many their legal right to work. The Board issued an order declaring the union guilty of unfair labor practices and directed the union to take affirmative action to correct such practices. The court enforced the board order.

*Dispute between union and self-operated business not "labor dispute."*—In a suit brought by a self-employed businessman against a manufacturer who, at the instigation of a labor organization, refused to sell his goods to said businessman, the New York Supreme Court, inter-

<sup>15</sup> *Allis-Chalmers Workers Union, UAW v. Wisconsin Employment Relations Board, C. Ct., Wisconsin, Aug. 31, 1946.*

preting the New York Anti-injunction Act, held that the term "labor dispute" does not include a dispute between a union and a self-operated business.<sup>16</sup>

At the instance of a union representing their employees, manufacturers had refused to supply goods to the self-operated businessman unless he joined the union. The operator sought an injunction against the continuation of the boycott. It was contended that such an injunction could not be issued without following the provisions of the New York Anti-injunction Act. This case, the court said, is to be distinguished from those in which the United States Supreme Court, interpreting the 14th amendment, held that there need be no "labor dispute" to authorize picketing. Here the question raised is whether "those who have the power to do so may legally agree to put an individual working for himself out of business."

<sup>16</sup> *Home Siphon Filling Corp. v. Kirach Beverages, Inc.*, N. Y. Sup. Ct., Sept. 4, 1946.

## Labor-Management Disputes

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### Value of Fact-Finding Procedure

THE usefulness of the fact-finding board as a sound alternative to labor-management strife is the subject of a report recently prepared by such a board and made public by the Secretary of Labor.<sup>1</sup> Owing to the limited use of voluntary arbitration and the opposition of employers and workers, alike, to compulsory arbitration, the members of the board state: "The procedure of fact finding and recommendations by a properly qualified governmental board, while still in an experimental state, in our opinion holds much promise of filling the vacuum."

In reporting to the Secretary, the board made the following observations on the fact-finding technique.

"The procedure of voluntary *arbitration* terminating in a final and binding award, is now quite generally accepted by American labor and management as a supplement to the collective-bargaining process, for the disposition of individual grievances and disputes concerning the *interpretation or application* of completed collective-bargaining arrangements. Our system of industrial jurisprudence, however, still lacks an effective procedure for the peaceful and equitable settlement of disputes arising, as in this case, *in the making of the collective-bargaining agreement itself*. There is strong resistance on the part of both labor and management to a legislatively imposed system of compulsory arbitration of the terms and conditions of employment to govern the relations of the parties during the contract period. Governmental control over the collective-bargaining process was a necessary evil in wartime. That experience, however, demonstrated the essential weakness of a universal system of compulsory governmental arbitration of terms and conditions of employment, namely the inevitable failure in many instances to give proper weight to the

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<sup>1</sup> U. S. Department of Labor: Report and Recommendations of the Fact Finding Board Appointed by Order of the Secretary of Labor on August 7, 1946, in the Dispute between the Milwaukee Gas Light Co. and Local 18, United Gas, Coke and Chemical Workers of America (CIO), by Clark Kerr, John Ernest Roe, and Nathan P. Feinsinger, chairman, Washington, September 14, 1946; and Press release of September 23, 1946.



collective-bargaining history and the current problems unique to particular industries, as well as to the special facts of particular cases.

"Voluntary arbitration of terms and conditions of employment, although growing in favor with management and labor in some industries, is not yet by any means a generally accepted pattern and is not likely to become such in the near future. Meanwhile the public interest, as well as the interests of the disputants, requires some equitable and expeditious procedure for the peaceful settlement of disputes in this category as an alternative to the strike, the lock-out, and other forms of industrial warfare.

"The procedure of fact finding and recommendations by a properly qualified governmental board, while still in an experimental state, in our opinion holds much promise of filling the vacuum. Even when the parties have not agreed in advance to be bound by the recommendations, neither party is likely to assume responsibility for a strike or a lock-out thereafter in the face of public opinion, which almost invariably supports the recommendations. It is not suggested that this procedure is by any means a panacea or that it will provide a perfect solution in any particular case. But it has the obvious advantages of flexibility, simplicity, and relative speed, and is adapted to take account of the collective-bargaining problems unique to particular industries and the special facts of particular cases. This opinion is fortified by the experience of the members of this board with the technique of fact finding in two cases involving public utilities, a field in which the public has a special interest in the development of alternatives to the strike and lock-out. In the *Pacific Gas and Electric* case a strike was avoided by invoking the services of a fact finding board whose recommendations were promptly accepted by both sides. In the *Milwaukee Gas Light* case a strike was settled again by invoking the services of a fact finding board, under whose guidance a complete settlement was reached of all issues in dispute during the process of the hearings.

"If these experiences and similar experiences of other boards in different industries are any reliable indication, as we believe they are, the procedure of fact finding and recommendations may very well prove to be useful on a broad scale as an effective supplement to collective bargaining, conciliation, mediation, and voluntary arbitration in the peaceful settlement of labor disputes involving the public interest. However, if this technique is to continue to serve a useful purpose it must, as previously indicated, remain flexible and simple in its procedures.

"This observation is dramatically illustrated by the procedural history of this case, stemming from the original agreement of the

parties for two boards, one to find the facts and the other to render a decision on the facts as found. It is extremely difficult even in ordinary administrative proceedings to draw a sharp line between the fact finding and recommending or deciding functions. It is even more difficult, and perhaps impossible, to draw such a line in the determination of a labor dispute. Fact finding in a labor dispute involves the determination of what facts are relevant, the choice of criteria or standards for appraising the evidence, and the exercise of expert judgment in making such appraisal, unless the fact finders are to be merely gatherers of statistics. Conversely, it is extremely doubtful whether a board of decision or any other agency could proceed with any confidence or efficacy to decide a labor dispute or make a recommendation for its settlement without having heard the evidence and observed the parties in the course of its presentation. In the typical labor dispute, as any arbitrator will testify, attitudes are more important than statistics, and must be taken account of as facts. Attitudes cannot easily be communicated through the written record.

"The court-jury and court-master situations are not analogous, since in those situations the jury or master acts throughout under the instructions and guidance of the court whereas in the proceedings originally contemplated by the parties in this case the court, i. e., the board of decision, would not even come into existence until the fact finding board had completed its work.

"The initial hearings in this proceeding developed a sharp cleavage of views between counsel for the parties as to the proper division of functions between the two boards. It is the opinion of the board, and one which we are certain is shared by counsel for the parties, that this cleavage of views would have been accentuated rather than resolved if the proceedings had taken the course initially contemplated by the parties. The net result would have been a whole series of new disputes of a highly technical legal nature instead of a settlement of the original disputes.

"Nothing said above is intended as a reflection upon the agreement reached originally. On the contrary the proponents of the dual board procedure deserve credit for their aid in effectuating a settlement of the dispute by this device. The parties, and particularly their counsel, are entitled to similar credit for recognizing the drawbacks in the procedure demonstrated by experience, for their consequent agreement to modify the procedure in connection with wage reopening, and for their cooperation in the settlement of this dispute so vital to the welfare of the public in the Milwaukee area."

## Controversies and Significant Developments, October 1946

REMOVAL of many consumer items from price control following President Truman's announcement of October 14 that "all price controls on livestock, and food and feed products therefrom," were to be lifted immediately prompted many unions to consider plans for seeking increases in wages to meet anticipated higher living costs. In some respects the President's mid-October action was presaged by the convention of the American Federation of Labor meeting in Chicago from October 7 to 17. In his keynote address to the delegates, AFL President William Green advocated the removal of all price controls "with the exception of perhaps . . . control of rent and some other items comparable to that." Toward the end of the convention the delegates unanimously adopted a report urging (1) the immediate lifting of price controls except rents, (2) dissolution of the Wage Stabilization Board, (3) return to collective bargaining "based on workers' contribution to production and capacity of the employer to pay," and (4) development and expansion of union-management cooperation. Shortly after the conclusion of the convention, on October 21, the United Mine Workers of America (AFL) notified the Government that the union desired to reopen the Krug-Lewis agreement of May 29, 1946, and negotiate higher wages in view of the changes in the stabilization program.

Among CIO unions, the United Automobile, Aircraft & Agricultural Implement Workers indicated that they would seek substantial wage increases in reopening their contract with the Chrysler Corp. Philip Murray, speaking to a Philadelphia gathering of the United Steelworkers of America, declared that "healthy wage increases" would be sought by the Steelworkers when revised contracts with the steel industry were considered in January 1947. The United Rubber, Cork, Linoleum & Plastic Workers on October 29 presented demands for a 26-cent-an-hour increase to the Big Four of the rubber industry—Goodrich, Goodyear, Firestone, and U. S. Rubber. Other CIO unions, including the oil and newspaper workers, were likewise engaged in formulating or seeking upward pay adjustments.

### *October Strike of Maritime Workers*

Eight days after termination of the September strike of unlicensed maritime workers, a Nation-wide work stoppage of licensed personnel tied up virtually all deep-sea shipping in American ports—other than colliers, tankers, and troop ships, which were not affected by the



dispute. The strike was called on October 1 by the Masters, Mates & Pilots of America (AFL) and the National Marine Engineers' Beneficial Association (CIO). At the same time West Coast members of the International Longshoremen's and Warehousemen's Union (CIO) stopped work, demanding a 33-cent hourly wage increase, and provision for a safety code. Principal demands of the MMP and the MEBA were for general wage increases of 30 and 35 percent, respectively, an increase in overtime rates from \$1.25 to \$2 per hour, and increased union control over hiring.

The contracts of all three unions had expired September 30, and the negotiations which preceded the stoppage of the licensed groups had failed to yield a settlement on the knotty union security demands of the masters and engineers responsible for ship operations. Some of the East and Gulf Coast contracts had included provisions for preferential hiring and maintenance of membership, but similar provisions had not been included in contracts with West Coast operators represented by the Pacific-American Shipowners' Association. The new union request called for hiring through union halls, by rotation. The operators objected to these demands, holding that such hiring provisions "amounted to a closed shop" and would mean "turning over management of deep-sea ships to union control."

Negotiations continued throughout early October, but it was not until October 22 that the MEBA reached an agreement with East and Gulf Coast operators. This agreement provided for preferential hiring, maintenance of membership, a requirement that all engineers must be union members, a 15-percent hourly wage increase, \$1.60 per hour overtime pay, and a 35-cent hourly increase for night relief officers who stand watch while a ship is in port. Pending ratification by local union members and agreement between the MMP and the East and Gulf Coast operators, who were deadlocked on the question of including ship captains in the hiring terms, the engineers continued their stoppage. On October 26 East and Gulf Coast operators and the MMP reached an agreement calling for wage increases, preferential hiring of union members, and recognition of the union as sole representative of licensed deck officers. A maintenance-of-union-membership provision was adopted covering mates but excluding masters, who were not required to be members of the union. These settlements opened the way for resumption of operations by most East and Gulf Coast ships by the end of the month.

On the West Coast, ships were still strike-bound, owing to failure of the West Coast operators to reach agreement with MEBA and MMP, and to the strike of the longshoremen. At the end of October the West Coast disputes were still not settled, despite renewed attempts

on the part of the Government to work out a union security proposal which would be acceptable to the shipowners and their licensed personnel.

### *Trans World Airline Stoppage*

On October 21 a stoppage of approximately 1,400 pilots and co-pilots of Trans World Airline (Transcontinental and Western Air, Inc.) grounded all company planes in the United States and foreign countries and halted service on the entire system. The dispute centered around demands of the workers, members of the Air Line Pilots Association, International (AFL), for wage increases for about 400 pilots and co-pilots of four-motored planes, and a few changes in working rules.

In the fall of 1945 the union and the company began negotiations to cover operations of "Skymaster" and "Constellation" planes. Conferences and mediation failed, and when a strike threatened, which in the opinion of the National Mediation Board would "substantially interrupt interstate commerce," President Truman created an emergency board on May 7 to deal with the dispute. The board's recommendations, issued July 7, reportedly were put into effect by the company in August, but were unacceptable to the pilots, who held that the findings were unsatisfactory and ambiguous. Further efforts to adjust the controversy through joint negotiation failed, and on October 23, 2 days after the strike began, the National Mediation Board again intervened. With no immediate prospect of settlement, the company announced that 15,000 other employees were placed on indefinite furlough. At the end of October no settlement had been reached.



### **Work Stoppages in September 1946**

WORK stoppages in September 1946, as compared with September 1945—the first month following VJ-day—were fewer in number and involved fewer workers but resulted in a greater loss of working time. Over the month interval, stoppages declined from 500 in August to 450 in September, although idleness increased from 3,425,000 man-days to 5,000,000 largely because of the protracted Nation-wide strike of unlicensed maritime workers (AFL and CIO) and the New York area trucking stoppages.

New stoppages recorded in September, together with 320 which continued from preceding months, made a total of 770 in effect at some time during the month. These involved 535,000 workers, compared with 400,000 in all stoppages in effect during August.

TABLE 1.—*Work Stoppages in September 1946, with Comparable Figures for Earlier Periods*<sup>1</sup>

Period	Work stoppages beginning in the period		Man-days idle (all stoppages)	
	Number	Workers involved	Number	Percent of estimated working time (all industries)
September 1946 <sup>2</sup> .....	450	380,000	5,000,000	0.79
August 1946 <sup>2</sup> .....	500	235,000	3,425,000	.49
September 1945.....	573	526,000	4,341,000	.73
January-September:				
1946 <sup>2</sup> .....	3,575	3,805,000	98,225,000	1.72
1945.....	3,784	2,446,000	14,761,000	.23
1944.....	3,917	1,600,000	6,791,000	.10
1935-39 average.....	2,318	965,000	13,630,000	.....

<sup>1</sup> All known work stoppages arising out of labor-management disputes involving 6 or more workers and continuing as long as a full day or shift are included in reports of the Bureau of Labor Statistics. Figures on "workers involved" and "man-days idle" cover all workers made idle in establishments directly involved in a stoppage. They do not measure the indirect or secondary effects on other establishments or industries whose employees are made idle as a result of material or service shortages.

<sup>2</sup> Preliminary estimates.

### *Activities of the United States Conciliation Service, September 1946*

During September 1946, the United States Conciliation Service terminated 1,111 disputes. Of these, 299 or 26.9 percent were work stoppages in which 124,278 workers were idle. In addition to the disputes terminated, the Service provided arbitrators who rendered 60 decisions in arbitration cases and made technical studies in 15 cases.

Excluding those cases which were stoppages at the time of assignment of a commissioner, the Service terminated 87.4 percent during the month (812 out of 929) before a stoppage took place. Of the 299 work stoppages terminated during the month, 182 or 60.9 percent were in effect at the time the commissioner entered the case.

TABLE 2.—*Cases Closed by the United States Conciliation Service in September 1946, by Type of Situation and Method of Handling*

Method of handling	Total		Work stoppages		Threatened stoppages		Controversies		Other situations	
	Number	Workers involved	Number	Workers involved	Number	Workers involved	Number	Workers involved	Number	Workers involved
All methods.....	1,263	396,024	299	124,278	440	118,542	366	111,257	158	41,947
Settled by conciliation.....	940	313,703	265	116,066	394	103,431	281	94,206	.....	.....
Dispute called off.....	64	18,395	5	121	23	11,318	36	6,956	.....	.....
Unable to adjust.....	19	3,729	9	1,607	2	122	8	2,000	.....	.....
Referred to NLRB and other agencies.....	56	9,602	14	2,774	18	3,472	24	3,356	.....	.....
Referred to arbitration.....	26	8,648	6	3,710	3	199	17	4,739	.....	.....
Consent elections held or union membership verified.....	6	199	.....	.....	.....	.....	.....	.....	6	199
Decisions rendered in arbitration.....	183	31,130	.....	.....	.....	.....	.....	.....	183	31,130
Technical services completed.....	25	1,493	.....	.....	.....	.....	.....	.....	25	1,493
Miscellaneous services.....	44	9,125	.....	.....	.....	.....	.....	.....	44	9,125

<sup>1</sup> This figure includes 23 arbitration cases involving 802 employees in which settlements other than arbitration decisions were made.



## Prices and Cost of Living

### Index of Consumers' Prices in Large Cities, September 15, 1946<sup>1</sup>

RETAIL prices to moderate-income city families advanced 1.2 percent between August 15 and September 15, 1946. Higher prices for food, clothing, and housefurnishings were primarily responsible for this increase, but all major groups contributed to the rise. On September 15, 1946, the consumers' price index was 145.9 percent of the 1935-39 average, and 48.0 percent above the level of prices at the beginning of the war in August 1939.

<sup>1</sup> The "consumers' price index for moderate-income families in large cities," formerly known as the "cost of living index," measures average changes in retail prices of selected goods, rents and services, weighted by quantities bought by families of wage earners and moderate-income workers in large cities in 1934-36. The items priced for the index constituted about 70 percent of the expenditures of city families whose incomes averaged \$1,524 in 1934-36.

The index only partially shows the wartime effects of changes in quality, availability of consumer goods, etc. The President's Committee on the Cost of Living has estimated that such factors, together with certain others not fully measured by the index, would add a maximum of 3 to 4 points to the index for large cities between January 1941 and September 1944. If account is taken of continued deterioration of quality and disappearance of low-priced merchandise between September 1944 and September 1945, which was estimated at an additional  $\frac{1}{2}$  point, the total large-city adjustment would be  $4\frac{1}{2}$  points. If small cities were included in the national average, another  $\frac{1}{2}$  point would be added, making the total approximately 5 points.

The indexes in the accompanying tables are based on time-to-time changes in the cost of goods and services purchased by wage earners and lower-salaried workers in large cities. They do not indicate whether it costs more to live in one city than in another. The data relate to the 15th of each month, except those for January 1941, in tables 1 and 2. They were estimated for January 1, 1941, the base date for determining allowable "cost of living" wage increases under the Little Steel formula and under the wage-price policy of February 1946. January 1, 1941, indexes in tables 1 and 2 have been estimated by assuming an even rate of change from December 15, 1940, to the next pricing date. The President's hold-the-line order was issued April 8, 1943. The peak of the rise which led to that order was reached in May, which is, therefore, used for this comparison.

Food prices are collected monthly in 56 cities during the first 4 days of the week which includes the Tuesday nearest the 15th of the month. Aggregate costs of foods in each city, weighted to represent food purchases of families of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. In March 1943, the number of cities included in the food index was increased from 51 to 56, and the number of foods from 54 to 61. Prices of clothing, housefurnishings, and miscellaneous goods and services are obtained in 34 large cities in March, June, September, and December. In intervening months, prices are collected in 21 of the 34 cities for a shorter list of goods and services. Rents are surveyed semiannually in most of the 34 cities (in March and September, or in June and December). In computing the all-items indexes for individual cities and the rent index for the average of large cities, because of the general stability of average rents at present, the indexes are held constant in cities not surveyed during the current quarter. Prices for fuel, electricity, and ice are collected monthly in 34 large cities.

Consumers' prices in mid-September were 13.2 percent higher than a year ago. Prices of living essentials advanced 1.0 percent between September 1945 and March 1946, 2.4 percent between March and June 1946, and 9.5 percent from June 15 to September 15, 1946.

The family food bill for all foods, except meats, increased 2.2 percent on the average between mid-August and mid-September. It was impossible in mid-September to obtain sufficient quotations to compute a reliable measure of change in retail meat prices because of the severe shortage of all meats except lamb (in a few cities) and poultry and fish. In order to meet the great demands for over-all price indexes for September, August prices for beef, veal, and pork were used in computing the indexes.<sup>2</sup> On this basis, the average advance in retail food prices in large cities was estimated at 1.7 percent between mid-August and mid-September. The retail food price index would have dropped 5 percent if consumers had been able to buy beef, veal, lamb, and pork at the OPA ceilings established on September 9. If this had happened, the total consumers' price index would have declined about 1½ percent instead of advancing 1.2 percent.

Between mid-August and mid-September beverage prices rose 28 percent, reflecting adjustments to new OPA ceiling prices for coffee. Egg prices advanced 11 percent, and canned fruits and vegetables averaged 6 percent higher as new packs at higher ceilings became available. Fresh fruit and vegetable prices dropped further by 2.5 percent after having fallen 8 percent between mid-July and mid-August. Prices of fats and oils declined 16 percent after the restoration of ceilings by the Decontrol Board in early September.

Clothing prices advanced 2.9 percent during the month—the largest monthly increase since early 1942. Higher prices were reported for nearly all garments with shorts, shoes, and business shirts advancing sharply. In many cities men's overcoats, wool jackets, and underwear, and women's coats and other wool clothing retailed at generally higher levels as fall lines came into stores.

Fuel, electricity, and ice costs increased 0.7 percent on the average, primarily because of higher prices for anthracite and bituminous

<sup>2</sup> This is the same type of procedure used during May and June when the meat shortage was also severe. August meat prices will be used in the index again in October if an adequate number of price quotations were not obtained between October 14 and October 18. If supplies are large enough to provide an adequate sample of prices in November, the November index will reflect the over-all change that has occurred in the price of meat between mid-August and mid-November. There are no figures to describe what happened to retail meat prices in the intervening period.

coal. Residential rents in the 18 cities surveyed in September were 0.1 percent higher than in June.<sup>3</sup>

Housefurnishings prices advanced 2.5<sup>7</sup> percent over the month as prices for cook stoves, living room and bedroom sets, and sheets and towels increased. Miscellaneous goods and services costs rose 0.6 percent because of higher prices for household cleaning supplies, gasoline, and some medical services.

Automobiles and a number of household durable goods which had been eliminated from the index during the war, such as sewing and washing machines, refrigerators, and vacuum cleaners, were reintroduced into the index in September. These reintroductions have caused the September indexes for the housefurnishings and miscellaneous groups to be 3.5 and 0.1 percent higher than the August indexes.<sup>4</sup>

The usual tables showing indexes and the percents of change in the consumers' price index were not completed in time to be included in this issue of the Review. Mimeographed copies of the tables may be obtained upon request to the Bureau of Labor Statistics.

<sup>3</sup> The Bureau of Labor Statistics obtains its figures on rents by asking tenants in a large sample of homes what rent they pay. The samples represent all tenant dwellings, new and old, small and large, from single homes to apartments. These rents are then compared with those reported by the tenants for the same dwellings at the last visit. The figures therefore represent rents paid for the same dwellings from one time to another; they do not take into account rentals for newly constructed dwellings nor shifts of repair costs to tenants. The figures do not reflect changes in sales prices of homes, the housing costs of the worker who has migrated, nor do they take into account the additional costs of the "extras" or premiums charged by some landlords when they rent to new tenants. The figures represent average changes in rents for the same dwellings whose tenants have not had to pay for major items of maintenance or repair out of their own pockets.

<sup>4</sup> During the war, automobiles and many household durable goods, such as refrigerators, sewing and washing machines, vacuum cleaners and radios, were not available to civilians. These articles were therefore removed from the consumers' price index. The index was calculated as though the money usually spent by moderate-income families for these articles was saved to replace these articles when they again became available or was used to purchase other goods and services which could be purchased at the time. The movement of prices of all articles which could be obtained was therefore used to represent those which could not.

Since sufficient quotations on the articles removed from the index during the war can now be obtained, these goods are being reintroduced into the index in September. In making these reintroductions current prices are being compared with prices of similar models when last available. If the present price of the article in a particular city when compared with the prewar price has changed by the same percentage as the index, the article can be reintroduced without affecting the present level of the index. If the percentage of price rise is greater, the level of the index must be adjusted upward; if the percentage is smaller, the level of the index must be adjusted downward.

The increases reflected by the September 1946 prices of the items reintroduced into the miscellaneous goods and services group were not as great as the rise for all other items in the consumers' price index. The increases reflected by the September 1946 prices of the items reintroduced into the housefurnishings group were, however, greater on the average than the rise for all other items in the consumers' price index.

During the war the relative importance of gasoline, fuel oil, and motor oil in the consumers' price index was reduced as the use of automobiles was restricted and rationing was extended. In September 1945 following the removal of rationing restrictions, the importance of these items was partially restored. The consumption weights for these items were readjusted this month to the basic consumption pattern established by the Bureau's consumer expenditure study in 1934-36.

After making these adjustments, the over-all level of the index is slightly lower than it otherwise would have been.



*Indexes of Consumers' Prices for Moderate-Income Families in Large Cities,  
1935 to September 1946*

Year and month	Indexes (1935-39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, elec- tricity, and ice	House- furnish- ings	Miscel- laneous
1935.....	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936.....	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937.....	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938.....	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939.....	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940.....	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941.....	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942.....	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943.....	123.6	138.0	129.7	108.0	107.7	125.6	115.8
1944.....	125.5	136.1	138.8	108.2	109.8	136.4	121.3
1945.....	128.4	139.1	145.9	108.3	110.3	145.8	124.1
1945: Jan. 15.....	127.1	137.3	143.0	(1)	109.7	143.6	123.3
Feb. 15.....	126.9	136.5	143.3	(1)	110.0	144.0	123.4
Mar. 15.....	126.8	135.9	143.7	108.3	110.0	144.5	123.6
Apr. 15.....	127.1	136.6	144.1	(1)	109.8	144.9	123.8
May 15.....	128.1	138.8	144.6	(1)	110.0	145.4	123.9
June 15.....	129.0	141.1	145.4	108.3	110.0	145.8	124.0
July 15.....	129.4	141.7	145.9	(1)	111.2	145.6	124.3
Aug. 15.....	129.3	140.9	146.4	(1)	111.4	146.0	124.5
Sept. 15.....	128.9	139.4	148.2	108.3	110.7	146.8	124.6
Oct. 15.....	128.9	139.3	148.5	(1)	110.5	146.9	124.7
Nov. 15.....	129.3	140.1	148.7	(1)	110.1	147.6	124.6
Dec. 15.....	129.9	141.4	149.4	108.3	110.3	148.3	124.8
1946: Jan. 15.....	129.9	141.0	149.7	(1)	110.8	148.8	125.4
Feb. 15.....	129.6	139.6	150.5	(1)	111.0	149.7	125.6
Mar. 15.....	130.2	140.1	153.1	108.4	110.5	150.2	125.9
Apr. 15.....	131.1	141.7	154.5	(1)	110.4	152.0	126.7
May 15.....	131.7	142.6	155.7	(1)	110.3	153.7	127.2
June 15.....	133.3	145.6	157.2	108.5	110.5	156.1	127.9
July 15.....	141.2	165.7	158.7	(1)	113.3	157.9	128.2
Aug. 15.....	144.1	171.2	161.2	108.7	113.7	160.0	129.8
Sept. 15.....	145.9	174.1	165.9	108.8	114.4	165.6	129.9

<sup>1</sup>Rents not surveyed in this month.

RETAIL  
selected

TABLE 1.—

All foods....  
Cereals and  
Meats.....  
Beef and  
Pork.....  
Lamb.....  
Chicken.....  
Fish, fresh.....  
Dairy products.....  
Eggs.....  
Fruits and vegetables.....  
Fresh.....  
Canned.....  
Dried.....  
Beverages.....  
Fats and oils.....  
Sugar and sweets.....

<sup>1</sup> Because  
lamb in 44 c  
ing the meat  
index.

TABLE 2.—

All foods....  
Cereals and  
Meats.....  
Beef and  
Pork.....  
Lamb.....  
Chicken.....  
Fish, fresh.....  
Dairy products.....  
Eggs.....  
Fruits and vegetables.....  
Fresh.....  
Canned.....  
Dried.....  
Beverages.....  
Fats and oils.....  
Sugar and sweets.....

<sup>1</sup> Aggregate  
and lower-  
<sup>2</sup> Prelimi  
<sup>3</sup> Because  
for these it  
<sup>4</sup> The ave  
due to insu

## Retail Prices of Food in September 1946

RETAIL prices of food in September 1946 in relation to those in selected preceding periods are shown in the accompanying tables.

TABLE 1.—Percent of Change in Retail Prices of Food in 56 Large Cities Combined, by Commodity Groups, in Specified Periods

Commodity group	Aug. 13, 1946, to Sept. 17, 1946	Sept. 18, 1945, to Sept. 17, 1946	May 18, 1943, to Sept. 17, 1946	Jan 14, 1941, to Sept. 17, 1946	Aug. 15, 1939, to Sept. 17, 1946
All foods.....	<sup>1</sup> +1.7	+24.9	+21.7	+78.0	+86.2
Cereals and bakery products.....	+1.4	+25.8	+27.6	+44.7	+47.0
Meats.....	<sup>1</sup> +1.0	+43.2	+36.3	+86.4	+97.0
Beef and veal.....	( <sup>1</sup> )	+52.3	+37.4	+64.8	+81.0
Pork.....	( <sup>1</sup> )	+62.0	+45.3	+111.8	+107.3
Lamb.....	<sup>1</sup> -1.1	+37.5	+32.4	+90.0	+89.8
Chickens.....	+10.0	+23.7	+30.6	+98.4	+103.8
Fish, fresh and canned.....	+1	+8.2	+18.6	+100.3	+138.8
Dairy products.....	+3.6	+39.9	+36.3	+77.5	+100.4
Eggs.....	+11.3	+5.1	+36.0	+98.5	+113.1
Fruits and vegetables.....	-1.1	+2.3	-7.6	+89.1	+90.9
Fresh.....	-2.5	-7	-12.0	+93.9	+95.2
Canned.....	+5.7	+14.0	+13.4	+62.7	+62.3
Dried.....	+1.4	+10.0	+17.5	+86.3	+105.5
Beverages.....	+28.0	+29.9	+30.1	+78.2	+70.7
Fats and oils.....	-16.0	+22.0	+19.9	+88.5	+79.2
Sugar and sweets.....	+9	+11.9	+10.9	+48.5	+48.0

<sup>1</sup> Because of insufficient quotations in September, prices of beef, veal, and pork in all 56 cities, of leg of lamb in 44 cities, and of lamb rib chops in 46 cities were held unchanged from the August levels in computing the meat subgroup indexes of beef and veal, pork, and lamb, the meat group index, and the all-foods index.

TABLE 2.—Indexes of Retail Prices of Food in 56 Large Cities Combined,<sup>1</sup> by Commodity Groups, on Specified Dates

[1935-39=100]

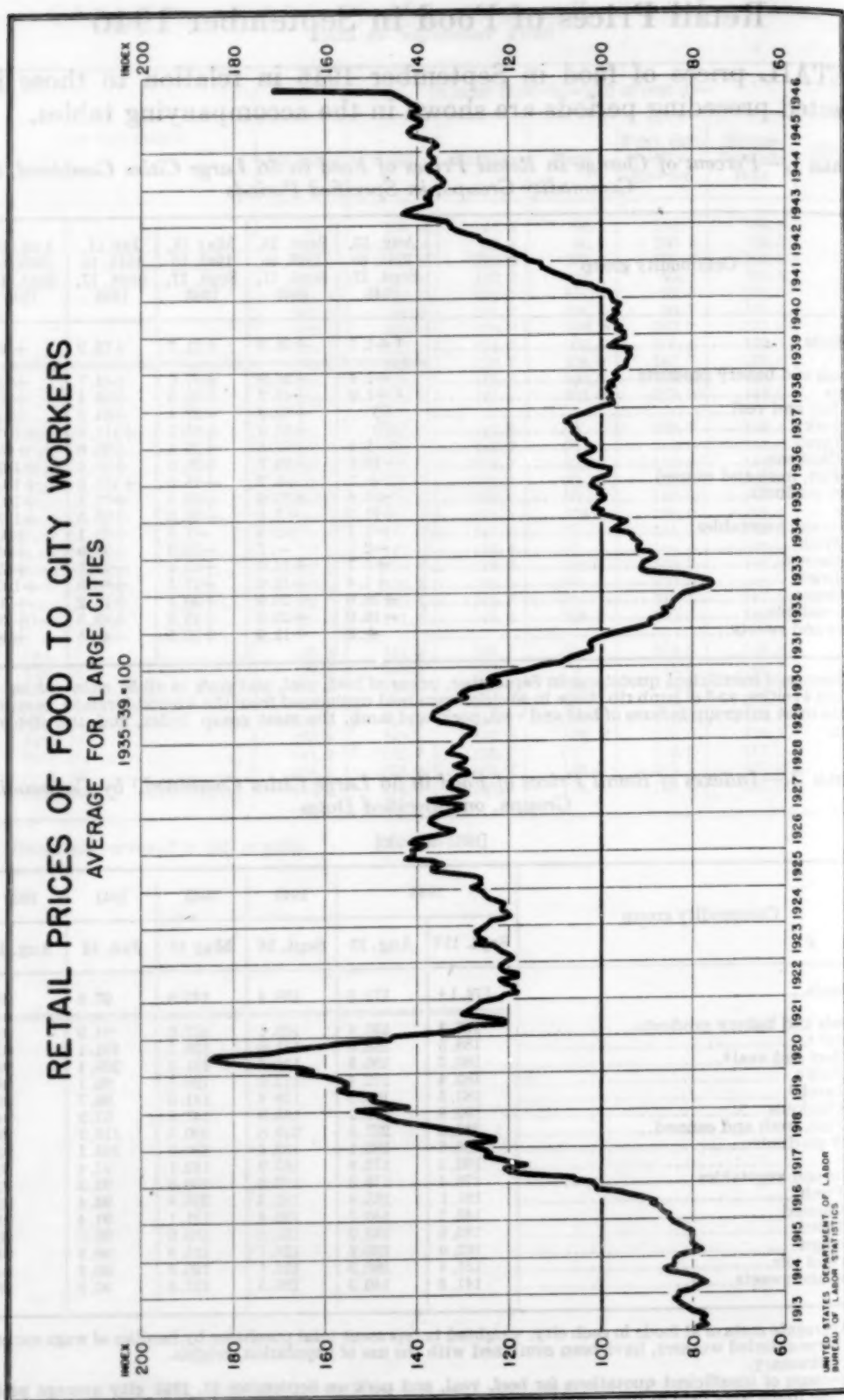
Commodity group	1946		1945	1943	1941	1939
	Sept. 17 <sup>2</sup>	Aug. 13	Sept. 18	May 18	Jan. 14	Aug. 15
All foods.....	174.1 <sup>3</sup>	171.2	139.4	143.0	97.8	93.5
Cereals and bakery products.....	137.3	135.4	109.1	107.6	94.9	93.4
Meats <sup>4</sup> .....	188.5	186.6	131.6	138.3	101.1	95.7
Beef and veal <sup>5</sup> .....	180.3	180.3	118.4	131.2	109.4	99.6
Pork <sup>5</sup> .....	182.4	182.4	112.6	125.5	86.1	88.0
Lamb <sup>5</sup> .....	187.5	189.5	136.4	141.6	98.7	98.8
Chickens.....	192.8	175.2	155.9	147.6	97.2	94.6
Fish, fresh and canned.....	237.8	237.6	219.8	200.5	118.7	99.6
Dairy products.....	186.6	180.1	133.4	136.9	105.1	93.1
Eggs.....	193.3	173.6	183.9	142.1	97.4	90.7
Fruits and vegetables.....	176.4	178.3	172.5	190.8	93.3	92.4
Fresh.....	181.1	185.8	182.3	205.8	93.4	92.8
Canned.....	148.7	140.7	130.4	131.1	91.4	91.6
Dried.....	185.6	183.0	168.8	158.0	99.6	90.3
Beverages.....	162.0	126.6	124.7	124.5	90.9	94.9
Fats and oils.....	151.4	180.3	124.1	126.3	80.3	84.5
Sugar and sweets.....	141.5	140.3	126.5	127.6	95.3	95.6

<sup>1</sup> Aggregate costs of 61 foods in each city, weighted to represent total purchases by families of wage earners and lower-salaried workers, have been combined with the use of population weights.

<sup>2</sup> Preliminary.

<sup>3</sup> Because of insufficient quotations for beef, veal, and pork on September 17, 1946 city average prices for these items were held at the August 13, 1946, level in calculating indexes.

<sup>4</sup> The average prices of either or both lamb cuts were held at the August 13, 1946, level in 47 of the 56 cities due to insufficient quotations on September 17, 1946.





# RETAIL PRICES FOR GROUPS OF FOOD AVERAGE FOR LARGE CITIES

1935-39 = 100

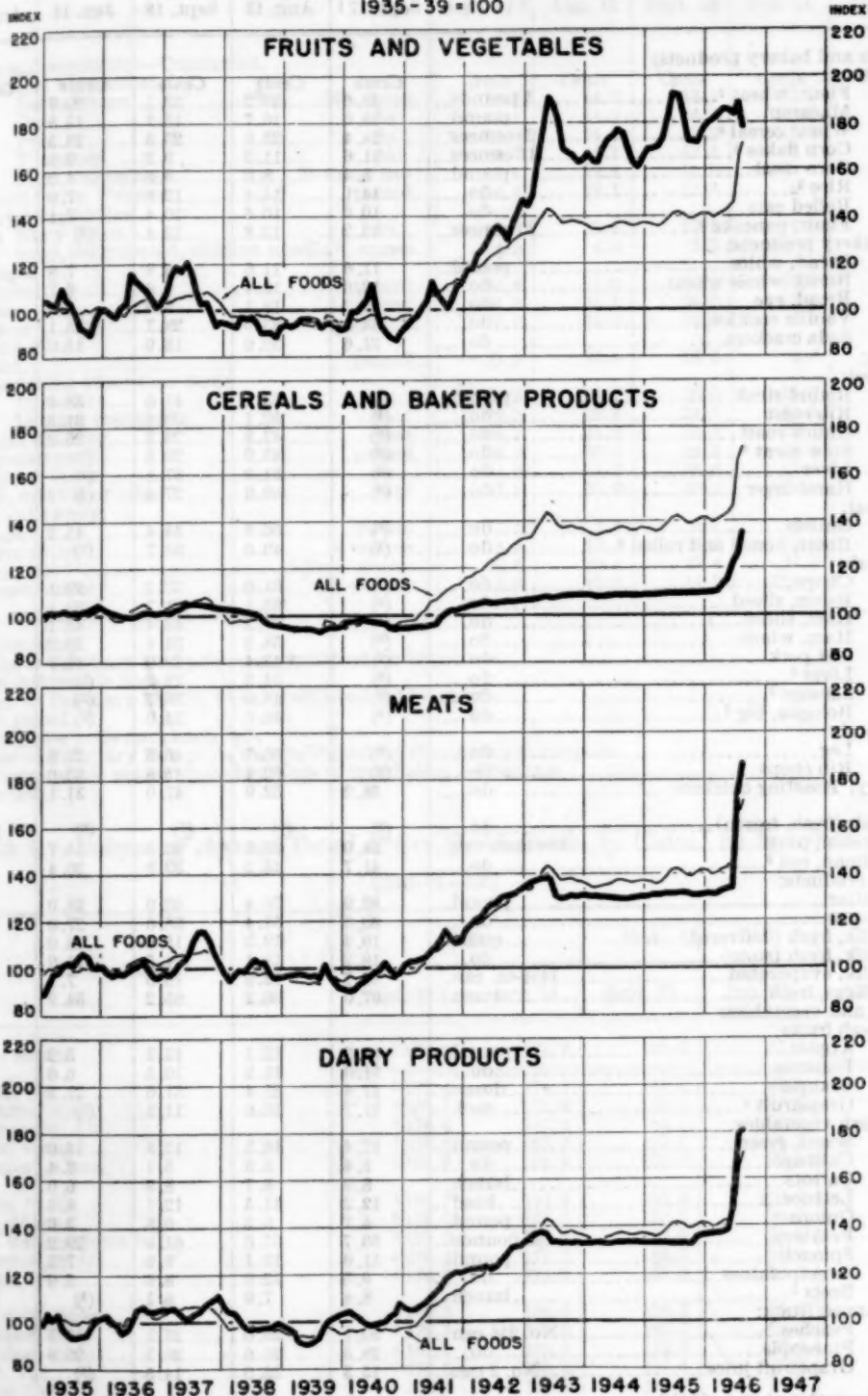


TABLE 3.—Average Retail Prices of 78 Foods in 56 Large Cities Combined, September 1946, Compared With Earlier Months

Article	1946		1945	1941	1939
	Sept. 17 <sup>1</sup>	Aug. 13	Sept. 18	Jan. 14	Aug. 15
<b>Cereals and bakery products:</b>					
<b>Cereals:</b>					
Flour, wheat <sup>2</sup> .....5 pounds.....	Cents 38.6	Cents 38.2	Cents 32.1	Cents 20.7	Cents 17.9
Macaroni.....pound.....	18.0	16.7	15.7	13.8	14.0
Wheat cereal <sup>3</sup> .....28 ounces.....	24.4	23.6	23.5	23.5	24.2
Corn flakes <sup>4</sup> .....11 ounces.....	11.6	11.2	9.2	9.8	9.7
Corn meal.....pound.....	8.4	8.0	6.5	4.2	4.0
Rice <sup>5</sup> .....do.....	14.1	14.4	12.8	7.9	7.5
Rolled oats.....do.....	10.6	10.5	10.4	7.1	7.1
Flour, pancake <sup>6</sup> .....20 ounces.....	13.2	12.8	12.4	( <sup>7</sup> )	( <sup>7</sup> )
<b>Bakery products:</b>					
Bread, white.....pound.....	11.6	11.6	8.8	7.8	7.8
Bread, whole wheat.....do.....	12.6	12.4	9.6	8.7	8.8
Bread, rye.....do.....	13.2	13.1	9.9	9.0	9.2
Vanilla cookies.....do.....	34.0	33.9	28.7	25.1	( <sup>7</sup> )
Soda crackers.....do.....	21.6	20.6	18.9	15.0	14.8
<b>Meats:</b>					
<b>Beef:</b>					
Round steak.....pound.....	( <sup>8</sup> )	63.1	41.0	38.6	36.4
Rib roast.....do.....	( <sup>8</sup> )	52.1	33.1	31.5	28.9
Chuck roast.....do.....	( <sup>8</sup> )	43.8	28.3	25.2	22.5
Stew meat <sup>9</sup> .....do.....	( <sup>8</sup> )	43.9	29.8	( <sup>8</sup> )	( <sup>8</sup> )
Liver.....do.....	( <sup>8</sup> )	51.2	37.1	( <sup>8</sup> )	( <sup>8</sup> )
Hamburger.....do.....	( <sup>8</sup> )	40.0	27.4	( <sup>8</sup> )	( <sup>8</sup> )
<b>Veal:</b>					
Cutlets.....do.....	( <sup>8</sup> )	66.6	44.4	45.2	42.5
Roast, boned and rolled <sup>10</sup> .....do.....	( <sup>8</sup> )	49.6	34.7	( <sup>8</sup> )	( <sup>8</sup> )
<b>Pork:</b>					
Chops.....do.....	( <sup>8</sup> )	61.0	37.2	29.1	30.9
Bacon, sliced.....do.....	( <sup>8</sup> )	63.1	41.2	30.1	30.4
Ham, sliced.....do.....	( <sup>8</sup> )	77.2	49.4	45.1	46.4
Ham, whole.....do.....	( <sup>8</sup> )	58.8	34.4	26.2	27.4
Salt pork.....do.....	( <sup>8</sup> )	42.4	22.0	16.7	15.4
Liver <sup>11</sup> .....do.....	( <sup>8</sup> )	34.3	22.2	( <sup>8</sup> )	( <sup>8</sup> )
Sausage <sup>12</sup> .....do.....	( <sup>8</sup> )	48.9	38.7	( <sup>8</sup> )	( <sup>8</sup> )
Bologna, big <sup>13</sup> .....do.....	( <sup>8</sup> )	46.0	34.0	( <sup>8</sup> )	( <sup>8</sup> )
<b>Lamb:</b>					
Leg.....do.....	( <sup>8</sup> )	56.7	40.5	27.8	27.6
Rib chops.....do.....	( <sup>8</sup> )	62.4	45.8	35.0	36.7
Poultry: Roasting chickens.....do.....	58.2	52.9	47.0	31.1	30.9
<b>Fish:</b>					
Fish (fresh, frozen).....do.....	( <sup>8</sup> )	( <sup>8</sup> )	( <sup>8</sup> )	( <sup>8</sup> )	( <sup>8</sup> )
Salmon, pink.....16-ounce can.....	24.0	25.5	23.3	15.7	12.8
Salmon, red <sup>14</sup> .....do.....	41.7	43.2	39.9	26.4	23.1
<b>Dairy products:</b>					
Butter.....pound.....	82.9	76.4	50.0	38.0	30.7
Cheese.....do.....	60.3	57.4	35.6	27.0	24.7
Milk, fresh (delivered).....quart.....	19.3	19.3	15.6	13.0	12.0
Milk, fresh (store).....do.....	18.2	18.1	14.5	11.9	11.0
Milk, evaporated.....14½-oz. can.....	12.7	12.6	10.0	7.1	6.7
Eggs: Eggs, fresh.....dozen.....	67.0	60.2	65.2	34.9	32.0
<b>Fruits and vegetables:</b>					
<b>Fresh fruits:</b>					
Apples.....pound.....	11.2	12.1	13.3	5.2	4.4
Bananas.....do.....	11.0	11.3	10.5	6.6	6.1
Oranges.....dozen.....	57.4	55.4	51.6	27.3	31.5
Grapefruit <sup>15</sup> .....each.....	11.7	10.6	11.3	( <sup>8</sup> )	( <sup>8</sup> )
<b>Fresh vegetables:</b>					
Beans, green.....pound.....	17.4	16.3	15.8	14.0	7.2
Cabbage.....do.....	5.4	5.3	5.1	3.4	3.9
Carrots.....bunch.....	8.9	8.7	8.9	6.0	4.6
Lettuce.....head.....	12.2	11.5	12.1	8.4	8.4
Onions.....pound.....	4.7	5.2	6.8	3.6	3.6
Potatoes.....15 pounds.....	63.7	67.6	61.9	29.2	34.4
Spinach.....pound.....	11.9	13.1	9.9	7.3	7.8
Sweet potatoes.....do.....	9.5	12.0	8.6	5.0	5.5
Beets <sup>16</sup> .....bunch.....	8.4	7.9	8.1	( <sup>8</sup> )	( <sup>8</sup> )
<b>Canned fruits:</b>					
Peaches.....No. 2½ can.....	30.1	29.0	27.3	16.5	17.1
Pineapple.....do.....	28.5	26.6	26.3	20.9	21.0
Grapefruit juice.....No. 2 can.....	15.3	15.0	14.5	( <sup>8</sup> )	( <sup>8</sup> )

See footnotes at end of table.

TABLE 3

Fruits and  
Canned  
Be  
Co  
Pe  
To  
So  
Dried  
Dried  
Na  
So  
Beverages  
Coffee  
Tea  
Cocoa  
Fats and  
Lard  
Shorte  
In  
In  
Salad  
Oleom  
Peanu  
Oil, co  
Sugar and  
Sugar  
Corn  
Molas  
Apple

1 Prelim  
2 Prior t  
3 Not in  
4 Prior t  
5 Not pr  
6 Comp  
7 Prior t  
8 Avera  
9 Revis

TABLE

United S  
Atlanta,  
Baltimor  
Birmingh  
Boston,  
Bridgepo  
Buffalo,  
Butte, M  
Cedar R  
Charlest  
Chicago,  
Cincinna  
Cleveland  
Columbu  
Dallas, T  
Denver,  
See 1

TABLE 3.—Average Retail Prices of 78 Food in 56 Large Cities Combined, September 1946, Compared With Earlier Months—Continued

Article	1946		1945	1941	1939
	Sept. 17 <sup>1</sup>	Aug. 13	Sept. 18	Jan. 14	Aug. 15
<b>Fruits and vegetables—Continued.</b>					
<b>Canned vegetables:</b>					
Beans, green..... No. 2 can.....	Cents 14.6	Cents 14.3	Cents 13.1	Cents 10.0	Cents 10.0
Corn..... do.....	15.4	14.9	14.8	10.7	10.4
Peas..... do.....	14.8	14.5	13.2	13.2	13.6
Tomatoes..... do.....	16.7	15.3	12.1	8.4	8.6
Soup, vegetable <sup>2</sup> ..... 11-ounce can.....	13.4	13.4	13.2	( <sup>3</sup> )	( <sup>3</sup> )
Dried fruits: Prunes..... pound.....	18.4	18.1	17.5	9.6	8.8
<b>Dried vegetables:</b>					
Navy beans..... do.....	13.9	13.8	11.5	6.5	5.8
Soup, dehydrated, chicken noodle <sup>2</sup> ..... ounce.....	4.0	4.0	3.8	( <sup>3</sup> )	( <sup>3</sup> )
<b>Beverages:</b>					
Coffee..... pound.....	40.4	31.0	30.6	20.7	22.3
Ten..... ¼ pound.....	24.3	24.1	24.2	17.6	17.2
Cocoa <sup>4</sup> ..... ¼ pound.....	10.5	10.4	10.4	9.1	8.6
<b>Fats and oils:</b>					
Lard..... pound.....	28.2	28.4	18.8	9.3	9.9
<b>Shortening other than lard:</b>					
In cartons..... do.....	22.9	26.7	20.0	11.3	11.7
In other containers..... do.....	26.3	28.9	24.5	18.3	20.2
Salad dressing..... pint.....	29.7	31.2	24.0	20.1	( <sup>5</sup> )
Oleomargarine..... pound.....	26.5	30.4	24.3	15.6	16.5
Peanut butter..... do.....	34.6	34.2	28.6	17.9	17.9
Oil, cooking or salad <sup>6</sup> ..... pint.....	32.1	33.6	30.0	( <sup>5</sup> )	( <sup>5</sup> )
<b>Sugar and sweets:</b>					
Sugar..... pound.....	7.5	7.5	6.7	5.1	5.2
Corn sirup..... 24 ounces.....	18.6	17.4	15.8	13.6	13.7
Molasses <sup>7</sup> ..... 16 fluid ounces.....	20.6	20.5	20.4	17.3	17.6
Apple butter <sup>8</sup> ..... 16 ounces.....	15.8	15.6	14.2	( <sup>5</sup> )	( <sup>5</sup> )

<sup>1</sup> Preliminary.

<sup>2</sup> Prior to February 1946 price was published for 10 pounds.

<sup>3</sup> Not included in index.

<sup>4</sup> Prior to February 1946 price was published for 8 ounces.

<sup>5</sup> Not priced.

<sup>6</sup> Composite price not computed.

<sup>7</sup> Prior to February 1946 price was published for 18 ounces avoirdupois.

<sup>8</sup> Average prices not computed because of insufficient quotations.

<sup>9</sup> Revised.

 TABLE 4.—Indexes of Average Retail Prices of All Foods, by Cities,<sup>1</sup> on Specified Dates

[1935-39=100]

City	1946		1945	1941	1939
	Sept. 17 <sup>2</sup>	Aug. 13	Sept. 18	Jan. 14	Aug. 15
United States.....	174.1	171.2	139.4	97.8	93.5
Atlanta, Ga.....	173.4	174.1	141.5	94.3	92.5
Baltimore, Md.....	180.1	178.0	148.1	97.9	94.7
Birmingham, Ala.....	176.6	180.8	144.1	96.0	90.7
Boston, Mass.....	168.0	165.2	133.4	95.2	93.5
Bridgeport, Conn.....	168.9	164.3	136.0	96.5	93.2
Buffalo, N. Y.....	164.7	162.8	135.3	100.2	94.5
Butte, Mont.....	170.0	163.6	137.7	98.7	94.1
Cedar Rapids, Iowa <sup>3</sup> .....	180.0	174.6	142.9	95.9	95.1
Charleston, S. C.....	170.4	173.2	139.5	95.9	95.1
Chicago, Ill.....	176.2	174.0	137.5	98.2	92.3
Cincinnati, Ohio.....	169.3	168.6	138.2	96.5	90.4
Cleveland, Ohio.....	179.3	178.6	142.7	99.2	93.6
Columbus, Ohio.....	161.9	160.3	132.5	93.4	88.1
Dallas, Tex.....	173.0	168.6	137.6	92.6	91.7
Denver, Colo.....	170.1	166.3	136.1	94.8	92.7

See footnotes at end of table.



TABLE 4.—Indexes of Average Retail Prices of All Foods, by Cities,<sup>1</sup> on Specified Dates—Continued

[1935-39=100]

City	1946		1945	1941	1939
	Sept. 17 <sup>2</sup>	Aug. 13	Sept. 18	Jan. 14	Aug. 15
Detroit, Mich.	168.4	168.5	136.8	97.0	90.6
Fall River, Mass.	168.4	164.7	132.4	97.5	95.4
Houston, Tex.	173.5	168.8	140.5	102.6	97.8
Indianapolis, Ind.	172.4	170.8	136.0	98.2	90.7
Jackson, Miss. <sup>3</sup>	189.0	188.0	151.2	105.3	
Jacksonville, Fla.	180.7	181.5	151.9	98.8	95.8
Kansas City, Mo.	165.3	164.3	132.8	92.4	91.5
Knoxville, Tenn. <sup>2</sup>	197.8	203.7	160.8	97.1	
Little Rock, Ark.	168.6	167.8	139.3	95.6	94.0
Los Angeles, Calif.	176.5	175.1	147.2	101.8	94.6
Louisville, Ky.	163.7	163.1	133.5	95.5	92.1
Manchester, N. H.	170.0	168.7	134.9	96.6	94.9
Memphis, Tenn.	185.3	187.5	148.1	94.2	89.7
Milwaukee, Wis.	170.3	168.3	137.8	95.9	91.1
Minneapolis, Minn.	167.9	163.3	132.6	99.0	95.0
Mobile, Ala.	176.4	175.5	148.9	97.9	95.5
Newark, N. J.	170.9	170.0	140.7	98.8	95.6
New Haven, Conn.	166.8	163.7	135.7	95.7	93.7
New Orleans, La.	190.7	188.8	155.7	101.9	97.6
New York, N. Y.	178.8	171.0	139.7	99.5	95.8
Norfolk, Va.	177.4	176.6	144.1	95.8	93.6
Omaha, Nebr.	171.0	167.8	131.1	97.9	92.3
Peoria, Ill.	183.8	183.5	145.6	99.0	93.4
Philadelphia, Pa.	172.6	169.2	137.6	95.0	93.0
Pittsburgh, Pa.	176.9	174.0	139.6	98.0	92.5
Portland, Maine.	167.0	166.5	133.1	95.3	95.9
Portland, Oreg.	184.5	182.1	149.3	101.7	96.1
Providence, R. I.	175.9	173.4	140.0	96.3	93.7
Richmond, Va.	167.4	164.1	138.5	93.7	92.2
Rochester, N. Y.	165.7	165.5	134.9	99.9	92.3
St. Louis, Mo.	174.5	175.5	141.4	99.2	93.8
St. Paul, Minn.	164.6	161.6	131.5	98.6	94.3
Salt Lake City, Utah.	175.4	171.8	143.4	97.5	94.6
San Francisco, Calif.	186.5	180.6	147.3	99.6	93.8
Savannah, Ga.	190.9	187.2	157.2	100.5	96.7
Scranton, Pa.	174.0	171.2	139.3	97.5	92.1
Seattle, Wash.	175.6	170.0	144.2	101.0	94.5
Springfield, Ill.	179.8	181.1	144.7	96.2	94.1
Washington, D. C.	174.7	169.9	141.5	97.7	94.1
Wichita, Kans. <sup>2</sup>	186.6	183.2	148.7	97.2	
Winston-Salem, N. C. <sup>3</sup>	179.2	177.4	142.0	93.7	

<sup>1</sup> Aggregate costs of 61 foods in each city, weighted to represent total purchases by wage earners and low-salaried workers, have been combined for the United States with the use of population weights.

<sup>2</sup> Preliminary.

<sup>3</sup> June 1940=100.

<sup>4</sup> Because of insufficient quotations for beef, veal, and pork on September 17, 1946, city average prices for these items were held at the August 13, 1946, level in calculating the all-foods index for each city.

<sup>5</sup> The average prices of either or both lamb cuts for these cities were also held at the August 13, 1946, level in calculating the all-foods index because of insufficient quotations on September 17, 1946.

TABLE 5.—*Indexes of Retail Food Prices in 56 Large Cities Combined, 1913 to September 1946*

[1935-39=100]

Year	All-foods index	Year	All-foods index	Year and month	All-foods index	Year and month	All-foods index
1913.....	79.9	1930.....	126.0	1945		1946	
1914.....	81.8	1931.....	103.9	January.....	137.3	January.....	141.0
1915.....	80.9	1932.....	86.5	February.....	136.5	February.....	139.6
1916.....	90.8	1933.....	84.1	March.....	135.9	March.....	140.1
1917.....	116.9	1934.....	93.7	April.....	136.6	April.....	141.7
1918.....	134.4	1935.....	100.4	May.....	138.8	May.....	142.6
1919.....	149.8	1936.....	101.3	June.....	141.1	June.....	145.6
1920.....	168.8	1937.....	105.3	July.....	141.7	July.....	165.7
1921.....	128.3	1938.....	97.8	August.....	140.9	August.....	171.2
1922.....	119.9	1939.....	95.2	September.....	139.4	September.....	174.1
1923.....	124.0	1940.....	96.6	October.....	139.3		
1924.....	122.8	1941.....	105.5	November.....	140.1		
1925.....	132.9	1942.....	123.9	December.....	141.4		
1926.....	137.4	1943.....	138.0				
1927.....	132.3	1944.....	136.1				
1928.....	130.8	1945.....	139.1				
1929.....	132.5						

### Wholesale Prices in September 1946

SHARP price declines for livestock and meats, following resumption of controls at the end of August, lowered average primary market prices<sup>1</sup> 4.0 percent between August and September. Most other commodity groups advanced slightly, reflecting OPA ceiling increases or decontrol actions. The index of commodity prices prepared by the Bureau of Labor Statistics stood at 124.0 percent of the 1926 average, 9.8 percent higher than in June before suspension of OPA controls and 65.3 percent above August 1939.

Average prices for farm products and foods declined 4.2 percent and 11.5 percent, respectively, while the average for all other commodities rose 0.5 percent. Hides and leather products increased 1.9 percent, textile products 1.4 percent, housefurnishing goods 0.9 percent, and building materials 0.8 percent. There were fractional increases for metals and metal products and miscellaneous commodities; chemicals and allied products were unchanged; and fuel and lighting materials declined fractionally.

The declines for farm products and foods were due chiefly to sharp decreases for livestock and meats from the high levels of uncontrolled prices, amounting to 15.3 percent and 33.7 percent, respectively.

<sup>1</sup> The Bureau of Labor Statistics wholesale price data, for the most part, represent prices in primary markets. In general, the prices are those charged by manufacturers or producers or are those prevailing on commodity exchanges. The monthly index is calculated from a monthly average of 1-day-a-week prices. It should not be compared directly with the weekly wholesale prices index which is designed as an indicator of week-to-week changes. Indexes for the last 2 months are preliminary.

Hog prices were down 26.8 percent and steers 15.8 percent, while beef, veal, and pork prices declined from 30 to 47 percent. Marketings of livestock fell to new lows and meat was extremely scarce. Live sheep remained exempt from price control, and there were sharp increases for ewes and wethers. However, prices of lambs declined nearly 10 percent as meats were recontrolled, reflecting buyers' resistance to previous high prices. Sharply lower prices also were reported for fats and oils, but with only scattered sales following recontrol. Prices of live and dressed poultry and eggs, in demand because of the scarcity of meats, increased substantially.

Prices of fruits and vegetables as a group were lower. Liberal supplies caused declines for potatoes and onions. Prices of oranges and apples also were lower while lemons and some canned and dried fruits increased.

Quotations for grain and hay, not under OPA control, advanced in response to reduced shipments because of railroad car shortage and withholding for livestock feed. Increased ceilings to cover higher grain and manufacturing costs, as well as termination of the flour subsidy, were followed by price advances for cereal products. Higher prices under increased ceilings also were reported for canned salmon, sugar, and coffee. Dairy products, exempt from price control, rose 4.5 percent during the month. There also were increases for black pepper, cream of tomato soup, and baking powder, all of which are exempt from OPA control. Cotton quotations advanced and Montevideo wool prices increased as European buyers overbid American buyers for supplies.

In the hides and leather products group, prices of leather and shoes increased, reflecting earlier ceiling increases. Prices of hides and skins declined because of temporary softening in asking prices for India goatskins.

Adjustments in cotton yarn and fabric ceilings to cover current raw cotton and manufacturing costs, as required by the Price Control Extension Act of 1946, led to an average increase of 4 percent for cotton goods in September. Chiefly as a result of the continuous advance in raw cotton quotations, prices of cotton products rose approximately 20 percent after June. Prices for numerous articles of men's clothing increased over the month under cost plus margin orders, because of higher material and labor costs. There were increases of 3 to 7 percent under higher ceilings in prices of wool piece goods of the same constructions and qualities as in June 1942. Raw silk prices declined 6 percent reflecting lack of demand, due in part to consumer resistance to the high prices of silk hosiery.



The advance for housefurnishings in September was caused chiefly by higher raw material and other costs, resulting in ceiling increases for a number of commodities. Cotton blankets, sheets and pillowcases, and tablecloths advanced with rising cotton costs. There also were upward advances for felt-base and linoleum floor coverings, dinnerware, furniture, and mechanical refrigerators.

The rise of 0.8 percent in building materials was due chiefly to increases for commodities removed from price control, particularly some paint materials, and for other commodities such as brick and tile and flooring for which incentive ceiling increases were granted. Decontrolled paint materials included carbon black, chrome pigments, and rosin. Ceiling increases were allowed for linseed oil, turpentine, and lithopone. Prices of red and white lead and litharge were rolled back to earlier ceilings. Prices of bone black were up sharply and there were declines for shellac and butyl acetate. There also were ceiling increases for shop lumber sold directly to mill-work manufacturers and for cement, window glass, and builders' hardware. Prices of cast-iron soil pipe declined under a partial roll-back from uncontrolled levels.

The slight increase for metals and metal products resulted from higher ceilings for bathtubs, butts and vises, and farm machinery, and higher prices for track bolts and rivets, which were removed from OPA control.

Miscellaneous commodities averaged slightly higher. Higher prices for paper, boxboard, and wood pulp, and for storage and radio batteries, under increased ceilings, and also for lubricating oil, tobacco, and paraffin, which were removed from OPA control, more than offset sharp decreases for cattle feed following recontrol.

Price movements for chemicals and allied products were mixed. There were increases for a number of products, such as arsenic and dynamite which were exempt from OPA control, and for silver nitrate, castor oil, and mixed fertilizers for which higher ceilings were authorized. On the other hand, prices of cottonseed meal and soybean oil dropped sharply with recontrol; cream of tartar and tartaric acid declined with lower production costs; toluene, ergot, and natural menthol decreased with improved supplies.

The slight drop in the fuel and lighting materials index resulted from lower realized prices for gas and electricity, which more than offset increases for coal and coke.

Sept. 1941	1.54	1.4	1.27	2.4	8.70	1.20
Aug. 1941	0	0	1.20	2.4	8.27	0.27
July 1941	0.04	0.04	1.20	2.40	1.22	0.02
June 1941	0.04	0.14	1.20	2.40	0.81	0.21
May 1941	0	0	1.20	2.40	2.4	0
April 1941	1.54	1.2	1.20	2.40	0.20	0.20

See footnote at end of table

TABLE 1.—Indexes of Wholesale Prices by Groups and Subgroups of Commodities, September 1946, Compared With Earlier Months

Groups and subgroups	Indexes (1926=100)				Percentage change to September 1946 from—		
	Sep- tember 1946	August 1946	Sep- tember 1945	August 1939	August 1946	Sep- tember 1945	August 1939
All commodities.....	124.0	129.1	105.2	75.0	-4.0	+17.9	+65.3
Farm products.....	154.3	161.0	124.3	61.0	-4.2	+24.1	+153.0
Grains.....	170.6	169.0	126.6	51.5	+9	+34.8	+231.3
Livestock and poultry.....	150.4	177.6	128.5	66.0	-15.3	+17.0	+127.9
Other farm products.....	151.1	147.8	120.3	60.1	+2.2	+25.6	+151.4
Foods.....	131.9	149.0	104.9	67.2	-11.5	+25.7	+96.3
Dairy products.....	169.1	161.8	110.3	67.9	+4.5	+53.3	+149.0
Cereal products.....	127.4	124.7	95.1	71.9	+2.2	+34.0	+77.2
Fruits and vegetables.....	115.5	120.4	117.5	58.5	-4.1	-1.7	+97.4
Meats.....	131.3	198.1	107.9	73.7	-33.7	+21.7	+78.2
Other foods.....	115.5	114.9	94.9	60.3	+5	+21.7	+91.5
Hides and leather products.....	141.6	138.9	118.7	92.7	+1.9	+19.3	+52.8
Shoes.....	144.8	140.1	126.3	100.8	+3.4	+14.6	+43.7
Hides and skins.....	151.5	155.8	118.1	77.2	-2.8	+28.3	+96.2
Leather.....	138.5	133.3	103.8	84.0	+3.9	+33.4	+64.9
Other leather products.....	115.8	115.8	115.2	97.1	0	+0.5	+19.3
Textile products.....	125.7	124.0	100.1	67.8	+1.4	+25.6	+85.4
Clothing.....	122.9	122.8	107.4	81.5	+1	+14.4	+50.8
Cotton goods.....	166.6	160.0	121.3	65.5	+4.1	+37.3	+154.4
Hosiery and underwear.....	88.7	87.7	71.5	61.5	+1.1	+24.1	+44.2
Rayon.....	30.2	30.2	30.2	28.5	0	0	+6.0
Silk.....	126.5	134.8	(2)	44.3	-6.2		+185.6
Woolen and worsted goods.....	113.9	112.8	112.7	75.5	+1.0	+1.1	+50.9
Other textile products.....	126.7	121.7	101.3	63.7	+4.1	+25.1	+98.9
Fuel and lighting materials.....	94.3	94.4	84.1	72.6	-1	+12.1	+20.9
Anthracite.....	113.5	113.4	102.2	72.1	+1	+11.1	+57.4
Bituminous coal.....	137.0	136.7	124.7	96.0	+2	+9.9	+42.7
Coke.....	147.5	147.0	134.9	104.2	+3	+9.3	+41.6
Electricity.....	(2)	(2)	65.5	75.8			
Gas.....	(2)	79.5	80.2	86.7			
Petroleum and products.....	73.0	72.8	62.6	51.7	+3	+16.6	+41.2
Metals and metal products.....	114.2	114.0	104.9	93.2	+2	+8.9	+22.5
Agricultural implements.....	108.6	108.5	97.9	93.5	+1	+10.9	+16.1
Farm machinery.....	109.8	109.7	98.9	94.7	+1	+11.0	+15.9
Iron and steel.....	113.5	113.3	99.6	95.1	+2	+14.0	+19.3
Motor vehicles.....	(1) (2)	(2)	112.8	92.5			
Nonferrous metals.....	101.4	101.4	85.7	74.6	0	+18.3	+35.9
Plumbing and heating.....	107.2	106.3	95.0	79.3	+8	+12.8	+35.2
Building materials.....	133.8	132.7	118.0	89.6	+8	+13.4	+49.3
Brick and tile.....	127.7	126.0	112.4	90.5	+1.3	+13.6	+41.1
Cement.....	106.5	105.8	99.6	91.3	+7	+6.9	+16.6
Lumber.....	178.2	177.6	155.0	90.1	+3	+15.0	+97.8
Paint and paint materials.....	116.7	113.9	107.6	82.1	+2.5	+8.5	+42.1
Plumbing and heating.....	107.2	106.3	95.0	79.3	+8	+12.8	+35.2
Structural steel.....	120.1	120.1	107.3	107.3	0	+11.9	+11.9
Other building materials.....	121.4	120.9	104.5	89.5	+4	+16.2	+35.6
Chemicals and allied products.....	98.4	98.4	95.3	74.2	0	+3.3	+32.6
Chemicals.....	98.6	98.4	96.1	83.8	+2	+2.6	+17.7
Drugs and pharmaceuticals.....	110.3	110.1	110.2	77.1	+2	+1	+43.1
Fertilizer materials.....	90.2	94.4	81.1	65.5	-4.4	+11.2	+37.7
Mixed fertilizer.....	90.0	87.7	86.6	73.1	+2.6	+3.9	+23.1
Oils and fats.....	103.3	102.5	102.0	40.6	+8	+1.3	+154.4
Housefurnishing goods.....	113.6	112.6	104.6	85.6	+9	+8.6	+32.7
Furnishings.....	119.4	118.5	107.7	90.0	+8	+10.9	+32.7
Furniture.....	107.5	106.6	101.5	81.1	+8	+5.9	+32.6
Miscellaneous.....	102.1	102.0	94.8	73.3	+1	+7.7	+39.3
Automobile tires and tubes.....	73.0	73.0	73.0	60.5	0	0	+20.7
Cattle feed.....	201.8	221.1	159.6	68.4	-8.7	+26.4	+195.0
Paper and pulp.....	121.9	119.6	109.3	80.0	+1.9	+11.5	+32.4
Rubber, crude.....	46.2	46.2	46.2	34.9	0	0	+32.4
Other miscellaneous.....	106.5	105.0	98.9	81.3	+1.4	+7.7	+31.0

See footnotes at end of table.

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TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities, September 1946, Compared With Earlier Months—Continued*

Groups and subgroups	Indexes (1926=100)				Percentage change to September 1946 from—		
	Sep- tember 1946	August 1946	Sep- tember 1945	August 1939	August 1946	Sep- tember 1945	August 1939
Raw materials.....	141.4	145.7	114.8	66.5	-3.0	+23.2	+112.6
Semimanufactured articles.....	115.0	111.9	96.5	74.5	+2.8	+19.2	+54.4
Manufactured products.....	117.2	123.9	101.7	79.1	-5.4	+15.2	+48.2
All commodities other than farm products.....	117.2	121.9	100.9	77.9	-3.9	+16.2	+50.4
All commodities other than farm products and foods.....	112.2	111.6	99.8	80.1	+5	+12.4	+40.1

<sup>1</sup> The Bureau of Labor Statistics, in computing its wholesale price index, currently is carrying motor vehicle prices at the level prevailing in April 1942. During the war, motor vehicles were not produced for general civilian sale and the Bureau has carried forward in each computation the April 1942 price. Current prices have not yet been reintroduced into the index. The Bureau will reintroduce prices of motor vehicles in its wholesale price index when the rate of production for one month or more equals the monthly average rate in 1941.

Users of these indexes as a basis for contract adjustment should note that the reintroduction of motor vehicles at current prices (about 25 percent above April 1942) would raise the September metals and metal products index about 10 percent; the all-commodities index about 1½ percent; the manufactured products index about 2½ percent; the index for all commodities other than farm products about 2 percent; and the index for all commodities other than farm products and foods about 2½ percent.

<sup>2</sup> Not available.

### Index Numbers by Commodity Groups, 1926 to September 1946

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1945, and by months from September 1945 to September 1946 are shown in table 2.

TABLE 2.—*Index Numbers of Wholesale Prices by Groups of Commodities*  
[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932.....	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933.....	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936.....	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937.....	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938.....	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939.....	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	77.1
1940.....	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941.....	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	87.3
1942.....	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	98.8
1943.....	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	103.1
1944.....	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	104.0
1945.....	128.2	106.2	118.1	100.1	84.0	104.7	117.8	95.2	104.5	94.7	105.8
<b>1945</b>											
September.....	124.3	104.9	118.7	100.1	84.1	104.9	118.0	95.3	104.6	94.8	105.2
October.....	127.3	105.7	118.6	101.0	84.2	105.0	118.3	95.5	104.7	94.8	105.9
November.....	131.1	107.9	118.8	101.1	84.6	105.2	118.7	95.7	104.7	94.8	106.8
December.....	131.5	108.6	118.9	101.4	84.8	105.6	119.5	96.1	104.7	94.8	107.1
<b>1946</b>											
January.....	129.9	107.3	119.4	101.6	84.9	105.7	120.0	96.0	106.2	95.3	107.1
February.....	130.8	107.8	119.6	102.2	85.1	106.6	120.9	95.9	106.5	95.6	107.7
March.....	133.4	109.4	119.8	104.7	85.0	108.4	124.9	96.0	106.9	95.6	108.9
April.....	135.4	110.8	119.8	107.9	86.1	108.8	126.5	96.1	107.5	95.7	110.2
May.....	137.5	111.5	120.4	108.8	86.1	109.4	127.8	96.5	108.3	97.0	111.0
June.....	140.1	112.9	122.4	109.2	87.8	112.2	129.9	96.4	110.4	98.5	112.9
July.....	157.0	140.2	141.2	118.1	90.3	113.3	132.1	99.3	111.9	101.3	124.7
August.....	161.0	149.0	138.9	124.0	94.4	114.0	132.7	98.4	112.6	102.0	129.1
September.....	154.3	131.9	141.6	125.7	94.3	114.2	133.8	98.4	113.6	102.1	124.0





Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during August 1946 and September 1946 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month, but are computed only to indicate the fluctuations from week to week.

TABLE 4.—Weekly Index Numbers of Wholesale Prices by Commodity Groups, August and September 1946

[1926=100]

Commodity group	Sept. 28	Sept. 21	Sept. 14	Sept. 7	Aug. 31	Aug. 24	Aug. 17	Aug. 10	Aug. 3
All commodities	124.4	123.8	121.7	122.0	128.2	128.4	128.3	127.1	125.0
Farm products	156.6	155.1	151.8	150.4	157.1	160.9	163.3	162.3	156.5
Foods	133.0	131.9	128.1	130.7	150.9	148.1	148.9	144.0	142.3
Hides and leather products	140.9	139.4	139.7	139.6	140.1	140.4	138.4	138.3	143.0
Textile products	125.4	123.7	117.5	117.3	115.2	115.0	114.9	114.6	110.8
Fuel and lighting materials	95.1	95.3	95.2	95.1	96.7	96.7	96.5	96.6	92.5
Metals and metal products	114.2	114.2	113.6	113.6	113.6	113.7	113.7	113.5	113.1
Building materials	134.0	133.9	133.3	133.1	132.8	132.9	132.7	132.4	132.0
Chemicals and allied products	98.2	98.4	97.9	97.9	98.1	98.3	98.3	98.2	98.1
Housefurnishing goods	115.0	114.7	114.3	114.1	114.0	114.0	114.0	113.4	113.0
Miscellaneous	101.8	101.8	101.9	101.3	101.5	101.5	101.0	101.7	101.6
Raw materials	143.6	142.5	138.4	137.5	142.6	144.9	146.3	145.7	140.6
Semimanufactured articles	116.7	116.2	111.9	111.5	111.3	111.3	110.5	110.4	109.0
Manufactured products	117.5	117.1	115.9	116.9	124.5	123.6	122.9	121.3	120.6
All commodities other than farm products	117.4	116.9	115.1	115.8	121.9	121.2	120.6	119.3	118.1
All commodities other than farm products and foods	112.4	112.1	111.0	110.8	111.0	111.0	110.8	110.8	109.2

## Construction

### Construction Activity, August–October 1946

#### *Progress on the Housing Program*

NEW permanent dwellings made ready for occupancy in September 1946 totaled 49,800, continuing the increase in housing completions that has occurred each month since the beginning of the year. September completions exceeded the August figure by 7,600 and were more than two and a half times the number estimated for January 1946 (18,700).

The Bureau of Labor Statistics provides the National Housing Agency with the statistics of progress in construction of new permanent dwellings in the nonfarm areas of the country. In addition to permanent housing, the National Housing Agency includes temporary federally financed re-use family and dormitory units, trailers, and conversion units in the Veterans' Emergency Housing Program goal of 2,700,000 units to be started by the end of 1947.

There were 56,800 new permanent homes started in September, compared with 64,400 in August. The short supply of building materials seems to be holding down the start of new projects now; however, builders are concentrating on completing the huge volume of construction already under way before winter sets in. During the first 9 months of 1946, 522,300 new permanent dwellings were started and 286,200 were completed—about two-thirds of the total of 808,600 starts and 430,200 completions of all types of units as reported by the National Housing Agency. About 362,600 permanent homes were under construction at the end of September.

Employment and expenditures on new dwellings reached their 1946 peak in September, when 618,000 workers were employed at the site of new housing projects and 385 million dollars was spent for new residential construction in nonfarm areas. Expenditures on new housing have nearly tripled and employment has more than doubled since the beginning of the Veterans' Emergency Housing Program in January.



TABLE 1.—Number of Dwelling Units Started and Completed Under Veterans' Emergency Housing Program, January–September 1946<sup>1</sup>

Month	Number of dwelling units					
	Started			Completed		
	Total	New permanent <sup>2</sup>	Other <sup>3</sup>	Total	New permanent <sup>4</sup>	Other <sup>4</sup>
First 9 months of 1946.....	808,600	522,300	286,300	430,200	286,200	144,000
January.....	56,500	36,100	20,400	28,800	18,700	10,100
February.....	63,300	43,100	20,200	29,700	20,300	9,400
March.....	83,900	60,400	23,500	33,400	22,600	10,800
April.....	98,700	66,100	32,600	38,400	26,400	12,000
May.....	105,400	67,500	37,900	43,800	30,300	13,500
June.....	94,600	63,600	31,000	51,700	34,900	16,800
July.....	104,700	64,300	40,400	61,400	41,000	20,400
August.....	102,600	64,400	38,200	63,500	42,200	21,300
September.....	98,900	56,800	42,100	79,500	49,800	29,700

<sup>1</sup> Includes all private and public dwelling units except those units built on military reservations.<sup>2</sup> Includes 6,741 permanent units started by New York City Housing Authority and 24,900 prefabricated units (National Housing Agency estimate).<sup>3</sup> Covers conversion units 66,800; temporary re-use units, 192,200 (National Housing Agency estimates); and 27,300 trailers (Bureau of the Census).<sup>4</sup> Break-down not available for conventional and prefabricated units.<sup>5</sup> Covers 64,600 conversion units, 52,100 re-use units, and 27,300 trailers.

### Total Construction Activity

Construction activity, after climbing steadily since the end of the war, began to edge downward in October, according to preliminary estimates. Both employment (2,246,000 workers) and expenditures for work put in place (1,215 million dollars) were a little below September levels, and activity on most types of projects either remained the same or declined slightly. September represented the month of peak activity in the postwar period.

Slackening of construction work is not unusual for this season of the year, especially when a high level of activity has been reached. However, cost uncertainties, in addition to material shortages, probably were retarding influences that prevented still further expansion at a time of pressing demands.

Construction and repair of nonfarm residential buildings declined slightly from the September high, with employment at 800,000 workers and expenditures at 427 million dollars in October 1946. Nevertheless, both employment and expenditures were over three times greater than in October a year ago.

Private nonresidential building activity in nonfarm areas remained practically unchanged from September. As shown by expenditure figures, commercial building declined for the third consecutive month in 1946. Offsetting gains in industrial and other types of building,

on the other hand, brought to 410 million dollars the amount spent by private builders on nonresidential building as a whole. Employment on this type of construction, 789,000 was slightly below the September peak.

By the end of October, 9.7 billion dollars had been spent for construction (including minor building repairs) during 1946. This was more than double the expenditures during the first 10 months of 1945. The dollar volume of private work put in place from January through October of this year amounted to 8.0 billion dollars, as against 2.8 billion for the corresponding months of 1945. Expenditures for publicly financed construction were almost the same in the two periods—1.7 billion dollars in 1946 and 1.8 billion in 1945.

TABLE 2.—*Estimated Construction Employment<sup>1</sup> in the United States, August–October 1946 and October 1945*

Type of project	Estimated employment (in thousands)			
	October 1946 <sup>2</sup>	September 1946 <sup>3</sup>	August 1946 <sup>3</sup>	October 1945 <sup>4</sup>
All types.....	2,246	2,302	2,300	1,175
New construction.....	1,946	2,002	2,013	896
Private construction.....	1,503	1,549	1,582	600
Residential (nonfarm) building.....	603	621	627	188
Nonresidential building.....	655	659	656	301
Farm construction.....	85	106	128	34
Public utilities.....	160	163	171	137
Public construction.....	443	453	431	236
Federal <sup>5</sup> .....	243	237	219	156
Residential building.....	115	100	82	8
Nonresidential building.....	24	26	26	89
Reclamation.....	10	10	10	7
River, harbor, and flood control.....	28	29	26	20
Streets and highways.....	53	56	59	12
All other <sup>6</sup> .....	13	16	16	20
Non-Federal.....	200	216	212	80
Streets and highways.....	93	97	98	41
All other <sup>6</sup> .....	107	119	114	39
Minor building repairs.....	300	300	287	279

<sup>1</sup> Estimates include wage earners, salaried employees, and special trades contractors actively engaged on new construction, additions and alterations, and on repair work of the type usually covered by building permits, whether performed under contract or by force-account. (Force-account employees are workers hired directly by the owner and utilized as a separate work force to perform construction work of the type usually chargeable to capital account.) These figures should not be confused with those included in the Bureau's nonagricultural employment series, which covers only employees of construction contractors and on Federal force-account work and excludes force-account workers of State and local governments, public utilities, and private firms.

<sup>2</sup> Preliminary.

<sup>3</sup> Revised.

<sup>4</sup> Includes the following force-account employees hired directly by the Federal Government: October 1945, 17,500; August 1946, 20,600; September 1946, 21,000; October 1946, 20,000.

<sup>5</sup> Mainly airports, water and sewer systems, and electrification projects.

<sup>6</sup> Includes community buildings, water supply and sewage disposal projects, and miscellaneous public service enterprises.

TABLE 3.—*Estimated Construction Expenditures<sup>1</sup> in the United States, August–October 1946, October 1945, and First 10 Months of 1945 and 1946*

Type of construction	Estimated expenditures (In millions)					
	October 1946 <sup>2</sup>	September 1946 <sup>3</sup>	August 1946 <sup>4</sup>	October 1945 <sup>5</sup>	First 10 months of—	
					1946 <sup>6</sup>	1945 <sup>7</sup>
Total construction.....	\$1,215	\$1,247	\$1,236	\$542	\$9,729	\$4,536
New construction <sup>8</sup> .....	1,036	1,072	1,075	423	8,222	3,676
Private construction.....	785	806	821	270	6,527	1,890
Residential (nonfarm) building.....	330	340	345	81	2,683	456
Nonresidential building.....	338	338	338	113	2,843	714
Industrial.....	191	186	173	70	1,436	471
Commercial.....	93	99	110	24	960	119
All other.....	54	53	55	19	447	124
Farm construction.....	40	50	60	14	320	176
Public utilities.....	77	79	78	62	681	544
Public construction.....	251	265	254	153	1,695	1,786
Residential building.....	50	45	35	3	201	67
Nonresidential (except military and naval facilities).....	30	35	32	40	267	725
Industrial facilities <sup>9</sup> .....	7	9	7	19	70	578
All other.....	23	26	25	21	197	147
Military and naval facilities.....	14	16	18	42	149	510
Highway.....	100	105	105	36	641	250
Other public.....	57	64	64	32	437	234
Federal <sup>10</sup> .....	24	28	26	13	284	85
State and local <sup>11</sup> .....	33	36	38	19	153	149
Minor building repairs <sup>12</sup> .....	179	175	161	119	1,507	860

<sup>1</sup> Estimated construction expenditures represent the monetary value of the volume of work put in place in continental United States during a given period of time. These figures should not be confused with the data on value of construction reported in the table on urban building construction (table 4).

<sup>2</sup> Preliminary.

<sup>3</sup> Revised.

<sup>4</sup> Estimates of new construction are prepared jointly by the Bureau of Labor Statistics and the Bureau of Foreign and Domestic Commerce, and include expenditures for new construction, major additions, and alterations.

<sup>5</sup> Expenditures for floating dry docks and facilities for the production of atomic bombs are excluded.

<sup>6</sup> Mainly river, harbor, flood control, reclamation, and power projects.

<sup>7</sup> Includes water supply, sewage disposal, and miscellaneous public-service enterprises.

<sup>8</sup> Covers privately financed structural repairs of the type for which building permits are generally required.

### Urban Building

Study of month-to-month changes in the amount of building permits issued is one means of predicting future trends in the building component of total construction volume. The permit valuation of building construction in urban areas (including the value of Federal construction contracts awarded) amounted to 339 million dollars in September, about four-fifths of the preceding month's total and less than half the March peak of 741 million dollars. The decrease during the month was shared by all types of building construction; the drop from March occurred mostly in nonresidential building. This decline in urban building permit valuations indicates that less building construction is being started now and foreshadows a drop in employment and expenditures during the next few months.



TABLE 4.—Permit Valuation <sup>1</sup> of Urban Building Construction, by Class of Construction and by Source of Funds, September 1946 and First 9 Months of 1945 and 1946

Class of construction	Valuation (in millions)				
	September 1946 <sup>2</sup>	August 1946 <sup>2</sup>	September 1945 <sup>2</sup>	First 9 months of—	
				1946 <sup>2</sup>	1945 <sup>2</sup>
	Total				
All building construction.....	\$339	\$412	\$192	\$3,738	\$1,199
New residential <sup>4</sup> .....	196	255	62	1,920	381
New nonresidential.....	90	93	77	1,209	476
Additions, alterations, and repairs.....	53	64	53	609	342
	Non-Federal				
All building construction.....	316	351	187	3,469	964
New residential <sup>4</sup> .....	174	195	62	1,692	351
New nonresidential.....	90	93	73	1,188	296
Additions, alterations, and repairs.....	52	63	52	589	317
	Federal				
All building construction.....	23	\$ 61	5	\$ 209	235
New residential <sup>4</sup> .....	22	\$ 60	(7)	\$ 228	30
New nonresidential.....	0	0	4	21	180
Additions, alterations, and repairs.....	1	1	1	20	25

<sup>1</sup> Includes value of Federal construction contracts awarded.<sup>2</sup> Preliminary.<sup>3</sup> Revised.<sup>4</sup> Includes value of dormitories and other nonhousekeeping residential buildings in addition to housekeeping units.<sup>5</sup> Includes \$22,241,000, the estimated cost of 3,485 dwelling units in New York City Housing Authority projects. These projects, although financed solely with city funds, are included with Federal projects in order to segregate public from private housing. All other types of building construction financed with State or local government funds are included under "non-Federal."<sup>6</sup> Includes \$36,748,850, the estimated cost of 6,741 dwelling units contained in New York City Housing Authority projects.<sup>7</sup> Value less than \$500,000.TABLE 5.—Number and Permit Valuation <sup>1</sup> of New Dwelling Units Scheduled To Be Started in All Urban Areas, September 1946 and First 9 Months of 1945 and 1946

Source of funds and type of dwelling	September 1946 <sup>2</sup>	August 1946 <sup>2</sup>	September 1945 <sup>2</sup>	First 9 months of—	
				1946 <sup>2</sup>	1945 <sup>2</sup>
Number of dwelling units					
All dwellings.....	44,012	55,081	14,655	414,396	101,667
Privately financed.....	35,020	38,600	14,619	340,236	91,543
1-family.....	29,313	32,921	12,567	287,144	75,998
2-family <sup>4</sup> .....	2,048	1,943	845	19,659	6,081
Multifamily <sup>5</sup> .....	3,659	3,796	1,207	33,433	9,464
Federally financed <sup>6</sup> .....	8,992	16,421	36	74,160	10,124
Valuation (in thousands)					
All dwellings.....	\$193,888	\$247,818	\$60,154	\$1,873,699	\$374,472
Privately financed.....	172,507	193,470	60,133	1,660,431	347,122
1-family.....	150,633	168,555	52,537	1,453,313	297,839
2-family <sup>4</sup> .....	8,951	8,654	3,197	81,964	19,768
Multifamily <sup>5</sup> .....	12,923	16,261	4,399	125,154	29,515
Federally financed <sup>6</sup> .....	21,381	54,348	21	213,268	27,350

<sup>1</sup> Includes value of Federal construction contracts awarded.<sup>2</sup> Preliminary.<sup>3</sup> Revised.<sup>4</sup> Includes 1- and 2-family dwellings with stores.<sup>5</sup> Includes multifamily dwellings with stores.<sup>6</sup> For number of, and estimated cost of, dwelling units contained in New York City Housing Authority projects but included here with federally financed housing, see table 4.

*Hours and Earnings*

In August 1946, weekly earnings in private building construction remained practically unchanged from the July average, which was the highest for any month during the period for which monthly data are available—1940 to date. Weekly earnings reached the high average of \$56.67 in August because of a slight increase during the month in hourly earnings in almost all the building trades.

The average workweek of 38.2 hours in August (exactly the same as the July average) was  $2\frac{1}{2}$  hours below the wartime peak in October 1944. On the other hand, average hourly earnings (\$1.482) were the highest recorded thus far. Average hourly pay was at peak in August not only in building construction as a whole but in almost all of the special trades as well, the only exceptions being carpentry and excavation and foundation work.

TABLE 6.—Average Hours and Earnings on Private Construction Projects for Selected Types of Work, August 1946<sup>1</sup>

[Subject to revision]

Type of work	Average hours per week			Average weekly earnings <sup>2</sup>			Average hourly earnings		
	Aug. 1946	July 1946	Aug. 1945	Aug. 1946	July 1946	Aug. 1945	Aug. 1946	July 1946	Aug. 1945
All types of work.....	38.6	38.6	( <sup>3</sup> )	\$56.49	\$56.16	( <sup>3</sup> )	\$1.462	\$1.454	( <sup>3</sup> )
Building construction.....	38.2	38.2	40.3	56.67	56.25	\$55.79	1.482	1.473	\$1.383
General contractors.....	37.8	37.7	39.5	53.66	53.01	52.17	1.419	1.408	1.319
Special building trades <sup>4</sup> .....	38.7	38.8	40.8	60.34	60.09	58.28	1.558	1.547	1.430
Plumbing and heating.....	39.5	39.4	41.4	61.43	60.92	57.47	1.555	1.548	1.389
Painting and decorating.....	37.8	37.6	39.7	59.75	58.81	59.35	1.581	1.565	1.497
Electrical work.....	40.3	40.9	44.5	67.58	67.94	67.87	1.678	1.661	1.526
Masonry.....	38.6	38.7	38.2	58.36	57.38	54.74	1.510	1.484	1.432
Plastering and lathing.....	37.7	37.2	34.9	64.60	61.75	54.20	1.716	1.659	1.552
Carpentry.....	39.4	39.1	40.1	56.82	57.07	53.89	1.442	1.458	1.345
Roofing and sheet metal.....	37.7	38.1	38.3	53.30	53.11	53.11	1.414	1.393	1.385
Excavation and foundation.....	38.3	38.8	40.3	54.21	55.28	53.52	1.416	1.423	1.328
Nonbuilding construction.....	41.0	41.0	( <sup>3</sup> )	55.46	55.68	( <sup>3</sup> )	1.353	1.357	( <sup>3</sup> )
Highway and streets.....	40.9	41.0	( <sup>3</sup> )	54.39	53.93	( <sup>3</sup> )	1.331	1.315	( <sup>3</sup> )
Heavy construction.....	41.1	40.7	( <sup>3</sup> )	56.72	56.81	( <sup>3</sup> )	1.382	1.396	( <sup>3</sup> )
Other.....	40.9	41.9	( <sup>3</sup> )	53.40	55.12	( <sup>3</sup> )	1.305	1.315	( <sup>3</sup> )

<sup>1</sup> Includes all firms reporting during the months shown (about 9,000) but not necessarily identical establishments.

<sup>2</sup> Hourly earnings when multiplied by weekly hours of work may not exactly equal weekly earnings because of rounding.

<sup>3</sup> Not available prior to February 1946.

<sup>4</sup> Includes types not shown separately.

## Trends of Employment and Labor Turn-Over

### Labor Force, September 1946

#### WHO IS COUNTED IN THE LABOR FORCE

**Labor Force.**—Persons 14 years of age and over who are employed or unemployed during the census week (the week containing the eighth day of the month).

**Employed.**—Those who, during the census week, (1) work full or part time for pay or profit; (2) work without pay in a family enterprise (farm or business) at least 15 hours; or (3) have a job but do not work because of illness, vacation, labor-management dispute, bad weather, or lay-off with definite instructions to return to work within 30 days.

**Unemployed.**—Those not working, but seeking a job.

Unemployment remained virtually unchanged between August and September, totaling 2,070,000, according to the Bureau of the Census Monthly Report on the Labor Force. Employment decreased seasonally by 590,000, and the civilian labor force declined by 560,000 to a total of 59,440,000.

A drop in unemployment among teen-age youths as school terms began was offset by increases in other groups—particularly among adult women. Veterans' unemployment continued at the level of 800,000.

Seasonal declines of 390,000 in the number of persons working on farms and of 200,000 in nonagricultural employment combined to account for the total reduction in employment. The decrease in nonfarm employment represented the net effect of several opposing forces. The number of youngsters quitting their jobs to return to school overbalanced a considerable inflow of veterans and adult women to nonfarm activities.

Nonagricultural employment of women over 20 years of age increased about 250,000 between August and September—the third



successive monthly gain. This gain and the rise in the number of unemployed adult women noted above point to a reversal of the postwar trend toward reduction in the number of women workers. Many women have entered or reentered the labor market in response to higher labor demand and the pressure of rising living costs. The increase in labor market participation of women, however, has been limited by high marriage and birth rates. This is borne out by the fact that nonagricultural employment of young women aged 20 to 34 has not increased since June and actually decreased slightly between August and September.

Agricultural employment, continuing the downswing from the summer peak, totaled 8,740,000 in September. This was approximately the same level as a year earlier.

*Total Labor Force in the United States, Classified by Employment Status, Hours Worked, and Sex, August and September 1946 and September 1945*

[Source: U. S. Department of Commerce, Bureau of the Census]

Item	Estimated number (in thousands) of persons 14 years of age and over <sup>1</sup>								
	Total, both sexes			Male			Female		
	August 1946	September 1946	September 1945	August 1946	September 1946	September 1945	August 1946	September 1946	September 1945
Total labor force <sup>2</sup> .....	62,380	61,660	64,790	45,170	44,360	45,870	17,210	17,300	18,920
Civilian labor force.....	60,000	59,440	62,900	42,830	42,170	44,250	17,170	17,270	18,650
Unemployment.....	2,040	2,070	1,650	1,580	1,580	930	460	490	720
Employment.....	57,960	57,370	61,250	41,250	40,590	43,320	16,710	16,780	17,930
Nonagricultural.....	48,830	48,630	52,450	33,940	33,810	36,660	14,890	14,820	15,790
Worked 35 hours or more.....	41,000	41,960	45,890	29,860	30,290	32,490	11,140	11,670	12,400
Worked 15-34 hours.....	3,800	3,640	4,070	1,940	1,760	2,460	1,860	1,880	2,610
Worked 1-14 hours <sup>3</sup> .....	950	1,130	1,250	400	440	450	550	690	800
With a job but not at work <sup>4</sup> .....	3,080	1,900	2,240	1,740	1,320	1,260	1,340	580	980
Agricultural.....	9,130	8,740	8,800	7,310	6,780	6,660	1,820	1,960	2,140
Worked 35 hours or more.....	6,970	7,120	6,550	6,210	6,030	5,570	760	1,090	980
Worked 15-34 hours.....	1,820	1,330	1,810	870	540	810	950	790	1,000
Worked 1-14 hours <sup>3</sup> .....	140	170	220	(*)	100	130	(*)	(*)	(*)
With a job but not at work <sup>4</sup> .....	200	120	220	150	110	150	(*)	(*)	(*)

<sup>1</sup> Estimates are subject to sampling variation which may be large in cases where the quantities shown are relatively small. Therefore, the smaller estimates should be used with caution; those under 100,000 are not presented in the table but are replaced with an asterisk (\*). All data exclude persons in institutions.

<sup>2</sup> Total labor force consists of the civilian labor force and the armed forces. Estimates of the armed forces during the census week are projected from data on net strength as of the first of the month.

<sup>3</sup> Excludes persons engaged only in incidental unpaid family work (less than 15 hours); these persons are classified as not in the labor force.

<sup>4</sup> Includes persons who had a job or business, but who did not work during the census week because of illness, bad weather, vacation, labor dispute, or because of temporary lay-off with definite instructions to return to work within 30 days of lay-off. Does not include unpaid family workers.

## Summary of Employment Reports for September 1946

IN SEPTEMBER 1946 the number of employees in nonagricultural establishments passed the 40-million mark for the first time since December 1944 and was only 700,000 or 1¾ percent below the wartime

peak, (December 1943). Between August and September 1946, employment rose by 281,000 to a level of 40,146,000 while unemployment, according to the Bureau of the Census, remained at about 2 million.

In addition to the employment gains of 174,000 in manufacturing and 108,000 in trade, the reopening of schools was reflected in a rise of 54,000 in government employment. Despite the increase, government employment was still almost  $\frac{1}{2}$  million below a year ago.

### Industrial and Business Employment

Of the 174,000 workers added to manufacturing between August and September, 138,000 were production workers. Most of this increase was concentrated in the heavy goods group where 6 of the major groups reported a gain. The automobile industry, with a gain of 33,000 workers, was in the lead, with increases of about 14,000 each in iron and steel and electrical machinery, and 19,000 in the other machinery group.

In the nondurable goods group, only food showed a decline between August and September. The over-all gain for the month was 36,000, due chiefly to employment increases of 34,000 in the textile and apparel combined.

TABLE 1.—Estimated Number of Employees in Nonagricultural Establishments, by Industry Division

Industry division	Estimated number of employees (in thousands)			
	September 1946	August 1946	July 1946	September 1945
Total estimated employment <sup>1</sup> .....	40, 146	39, 865	39, 260	36, 398
Manufacturing <sup>2</sup> .....	14, 752	14, 578	14, 245	13, 159
Mining.....	824	828	815	784
Contract construction and Federal force-account construction.....	2, 094	2, 091	1, 976	945
Transportation and public utilities.....	3, 949	3, 998	3, 963	3, 631
Trade.....	7, 924	7, 826	7, 740	7, 143
Finance, service, and miscellaneous.....	5, 155	5, 160	5, 152	4, 603
Federal, State, and local government, excluding Federal force-account construction.....	5, 448	5, 394	5, 369	5, 933

<sup>1</sup> Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

<sup>2</sup> Estimates for manufacturing have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency. These estimates, which are comparable with the production-worker estimates in table 2, supersede those shown in mimeographed releases dated prior to July 18, 1946, and issues of the Monthly Labor Review dated prior to August 1946. Data from January 1943 forward were affected by this revision. A complete series from 1939 to date is available upon request.

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TABLE 2.—*Estimated Number of Production Workers and Indexes of Production-Worker Employment in Manufacturing Industries, by Major Industry Group*<sup>1</sup>

Group	Estimated number of production workers (in thousands)		Production-worker indexes (1939=100)	
	September 1946	September 1945	September 1946	September 1945
All manufacturing.....	12,019	10,529	146.7	128.5
Durable goods.....	6,091	5,234	168.7	144.9
Nondurable goods.....	5,928	5,295	129.4	115.6
Iron and steel and their products.....	1,456	1,240	146.9	125.1
Electrical machinery.....	542	445	209.3	171.5
Machinery, except electrical.....	1,070	913	202.5	172.7
Transportation equipment, except automobiles.....	444	788	279.8	496.5
Automobiles.....	764	426	189.8	105.9
Nonferrous metals and their products.....	396	301	172.9	131.2
Lumber and timber basic products.....	624	508	148.5	120.8
Furniture and finished lumber products.....	388	303	118.2	92.4
Stone, clay, and glass products.....	407	310	138.7	105.7
Textile-mill products and other fiber manufactures.....	1,212	1,051	106.0	91.9
Apparel and other finished textile products.....	1,068	911	135.3	115.3
Leather and leather products.....	355	305	102.4	88.0
Food.....	1,157	1,183	135.4	138.4
Tobacco manufactures.....	87	83	93.5	89.5
Paper and allied products.....	368	312	138.6	117.5
Printing, publishing, and allied industries.....	387	324	117.9	98.8
Chemicals and allied products.....	484	496	167.9	172.1
Products of petroleum and coal.....	152	131	143.8	123.3
Rubber products.....	230	165	190.1	136.5
Miscellaneous industries.....	428	334	174.9	136.5

<sup>1</sup> The estimates and indexes presented in this table have been adjusted to levels indicated by the final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency.

### Public Employment

Federal employment fell almost 110,000 in the month ending September 1, to a level of 2.6 million in both domestic and foreign areas and 2.2 million in the 48 States and the District of Columbia. The War and Navy Departments were the only agencies showing marked declines and the Veterans' Administration and War Assets Administration were the only ones showing real uptrends. (Employment of the War and Navy Departments fell 116,000, while that of the War Assets Administration and Veterans' Administration gained 13,000 during the month.) More than half the September decline was in foreign areas where operations requiring the services of aliens were drastically curtailed by the War Department.

Although, since the close of the war, the net reduction in Federal employment has amounted to 1,300,000 in both foreign and domestic areas, the war agencies have contracted by 1,500,000 (52 percent). The chief expanding agencies—the Veterans' Administration, War Assets Administration, and Post Office Department—have added 200,000.

Employment in the Washington, D. C., metropolitan area declined 2,000 during the month to a total of 242,000 in the three Federal branches, the executive, legislative, and judicial. Although this was



the lowest level reached since April 1942, employment in the Washington area had edged upwards from the start of the European war and in April 1942 was 115,000 higher than, or almost double, its September 1939 strength. During the first postwar year, Federal employment in the District of Columbia declined 23,000 but, owing to pay increases which affected nearly all employees at some time during the year, aggregate pay rolls were about the same in September 1946 as in September 1945.

Because of the more drastic cuts in Federal employment outside the National Capital, total Federal pay rolls were reduced in the first postwar year by approximately \$118,000,000 a month.

*Source of data.*—Data for the Federal executive service are reported through the Civil Service Commission, whereas data for the legislative and judicial services and Government corporations are reported to the Bureau of Labor Statistics. Employment on Federal force-account construction is included in both the executive branch (tables 3 and 4) and in construction employment (table 5).

TABLE 3.—*Employment and Pay Rolls for Regular Federal Services and for Government Corporations in Selected Months*

Year and month	Total	Executive <sup>1</sup>		Legisla- tive	Judicial	Govern- ment corporations <sup>2</sup>	
		All areas	Continental United States				
			Total				Washing- ton, D. C., area
Employment <sup>3</sup>							
September 1939.....	987,283	954,018	912,852	125,092	5,532	2,162	25,571
September 1940.....	1,107,053	1,072,173	1,007,503	143,318	6,011	2,482	26,387
September 1941.....	1,547,779	1,508,554	1,401,471	187,626	6,048	2,578	30,599
September 1942.....	2,593,252	2,550,823	2,337,024	276,184	6,517	2,662	33,250
September 1943.....	3,230,958	3,186,181	2,848,050	271,973	6,221	2,651	35,905
September 1944.....	3,375,279	3,331,179	2,908,498	264,535	6,272	2,641	35,187
September 1945.....	3,727,474	3,683,661	2,819,360	251,090	6,445	2,883	34,485
July 1946.....	2,725,779	2,682,586	2,266,850	235,112	6,697	3,063	33,433
August 1946.....	2,661,921	2,618,805	2,250,166	234,758	6,736	3,036	33,344
September 1946 <sup>4</sup> .....	2,555,352	2,512,471	2,200,271	232,602	6,825	3,075	32,981
Pay rolls (in thousands) <sup>5</sup>							
September 1943.....	\$660,657	\$652,806	\$600,370	\$55,289	\$1,502	\$768	\$5,491
September 1944.....	683,744	675,875	623,216	54,921	1,522	755	5,562
September 1945 <sup>4</sup> .....	631,011	622,992	554,141	52,953	1,749	781	5,489
July 1946 <sup>4</sup> .....	534,406	525,674	486,065	57,280	2,093	945	5,694
August 1946 <sup>4</sup> .....	530,631	521,859	485,176	57,135	2,106	1,009	5,657
September 1946 <sup>4</sup> .....	513,409	504,554	468,429	55,245	2,111	1,136	5,608

<sup>1</sup> Includes employees on force-account construction who are also included under construction projects (table 5). Beginning July 1945, data include clerks at third-class post offices who were previously working on a contract basis. Data exclude substitute rural mail carriers.

<sup>2</sup> Data are for employees of the Panama Railroad Co., the Federal Reserve banks, and banks of the Farm Credit Administration. Data for other Government corporations are included under the executive service.

<sup>3</sup> Employment is as of the first of the calendar month.

<sup>4</sup> Subject to revision.

<sup>5</sup> Data are for all pay periods ending within the calendar month. Beginning July 1945, this represents pay for four weeks for most employees.

Military personnel and pay figures are reported monthly to the Bureau of Labor Statistics but are published here only quarterly.

Mimeographed tables giving civilian employment and military personnel and pay, monthly, 1939 to date, and civilian pay rolls, monthly, 1943 to date, are available upon request.

TABLE 4.—*Employment and Pay Rolls for the Executive Branch of the Federal Government in Selected Months*<sup>1</sup>

Year and month	All agencies	War agencies <sup>2</sup>			Other agencies <sup>3</sup>		
		Total	Conti- nental United States	Outside conti- nental United States <sup>4</sup>	Total	Conti- nental United States	Outside conti- nental United States <sup>4</sup>
Employment <sup>5</sup>							
September 1939-----	954, 018	218, 966	187, 707	31, 259	735, 052	725, 145	9, 907
September 1940-----	1, 072, 173	310, 229	257, 532	52, 697	761, 944	749, 971	11, 973
September 1941-----	1, 508, 554	686, 889	593, 278	93, 611	821, 665	808, 193	13, 472
September 1942-----	2, 550, 823	1, 690, 437	1, 491, 058	199, 379	860, 386	845, 966	14, 420
September 1943-----	3, 186, 181	2, 367, 260	2, 046, 044	321, 216	818, 921	802, 006	16, 915
September 1944-----	3, 331, 179	2, 483, 878	2, 076, 989	406, 889	847, 301	831, 509	15, 792
September 1945-----	3, 683, 661	2, 749, 226	1, 909, 339	839, 887	934, 435	910, 021	24, 414
July 1946-----	2, 682, 586	1, 547, 893	1, 159, 084	388, 809	1, 134, 693	1, 107, 766	26, 927
August 1946-----	2, 618, 805	1, 470, 771	1, 129, 379	341, 392	1, 148, 034	1, 120, 787	27, 247
September 1946 <sup>6</sup> -----	2, 512, 471	1, 358, 853	1, 074, 300	284, 553	1, 153, 618	1, 125, 971	27, 647
Pay rolls (in thousands) <sup>7</sup>							
September 1943-----	\$652, 896	\$491, 580	\$442, 788	\$48, 792	\$161, 316	\$157, 582	\$3, 734
September 1944-----	675, 875	505, 154	455, 901	49, 253	170, 721	167, 315	3, 406
September 1945 <sup>6</sup> -----	622, 902	434, 620	370, 727	63, 893	188, 372	183, 414	4, 958
July 1946 <sup>6</sup> -----	525, 674	277, 907	245, 220	32, 687	247, 767	241, 745	6, 022
August 1946 <sup>6</sup> -----	521, 859	271, 432	241, 223	30, 209	250, 427	243, 953	6, 474
September 1946 <sup>6</sup> -----	504, 554	253, 096	223, 533	29, 564	251, 458	244, 896	6, 562

<sup>1</sup> Includes employees on force-account construction who are also included under construction projects (table 5).

<sup>2</sup> Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and the emergency war agencies.

<sup>3</sup> Beginning July 1945, data include clerks at third-class post offices who previously were working on a contract basis. Data exclude substitute rural mail carriers.

<sup>4</sup> Includes Alaska and the Panama Canal Zone.

<sup>5</sup> Employment is as of the first of the calendar month.

<sup>6</sup> Subject to revision.

<sup>7</sup> Data are for all pay periods ending within the calendar month. Beginning July 1945, this represents pay for four weeks for most employees.

### Construction

Data on construction employment and on average hours and earnings on private construction projects are given in the section on Construction (p. 798).

## Detailed Reports for Industrial and Business Employment, August 1946

MONTHLY reports on employment and pay rolls are presented below for more than 150 manufacturing industries and for 27 non-manufacturing industries, including water transportation and class I steam railroads. Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and amount of pay rolls for the period ending nearest the 15th of the month.

TABLE 1.—Estimated Number of Production Workers in Manufacturing Industries<sup>1</sup>

Industry group and industry	Estimated number of production workers (in thousands)			
	August 1946	July 1946	June 1946	August 1945
All manufacturing.....	11,881	11,552	11,412	12,179
Durable goods.....	5,997	5,828	5,713	6,779
Nondurable goods.....	5,884	5,724	5,699	5,400
<i>Durable goods</i>				
Iron and steel and their products.....	1,433	1,390	1,351	1,490
Blast furnaces, steel works, and rolling mills.....	481.1	469.5	453.1	450.7
Gray-iron and semisteel castings.....	81.6	80.7	78.2	88.7
Malleable-iron castings.....	24.2	23.7	23.7	22.0
Steel castings.....	50.2	50.2	50.8	58.0
Cast-iron pipe and fittings.....	17.1	18.3	16.2	14.7
Tin cans and other tinware.....	44.4	43.4	41.9	40.5
Wire drawn from purchased rods <sup>2</sup> .....	29.1	28.7	28.6	29.5
Wirework.....	39.5	36.5	34.3	29.8
Cutlery and edge tools.....	25.7	25.4	25.5	22.1
Tools (except edge tools, machine tools, files, and saws) <sup>2</sup> .....	25.6	24.3	25.3	24.5
Hardware.....	45.9	44.8	45.1	41.3
Plumbers' supplies.....	27.1	25.8	25.6	21.0
Stoves, oil burners, and heating equipment, not elsewhere classified.....	56.8	54.0	51.9	55.6
Steam and hot-water heating apparatus and steam fittings <sup>2</sup> .....	48.0	47.7	46.2	44.3
Stamped and enameled ware and galvanizing.....	79.0	75.4	73.0	73.9
Fabricated structural and ornamental metalwork.....	55.5	53.2	50.9	50.1
Metal doors, sash, frames, molding, and trim.....	11.0	9.8	8.6	7.7
Bolts, nuts, washers, and rivets.....	18.7	17.6	17.4	21.7
Forgings, iron and steel.....	26.3	25.3	25.9	30.0
Wrought pipe, welded and heavy riveted.....	12.3	10.9	10.7	21.9
Screw-machine products and wood screws.....	27.8	26.8	27.2	34.9
Steel barrels, kegs, and drums.....	6.2	5.6	5.5	8.1
Firearms.....	14.0	13.3	12.6	16.5
Electrical machinery.....	520	504	501	640
Electrical equipment.....	286.7	278.7	276.9	373.8
Radios and phonographs.....	82.3	76.8	76.8	98.8
Communication equipment.....	86.0	86.0	85.7	93.0
Machinery, except electrical.....	1,051	1,027	1,011	1,076
Machinery and machine-shop products.....	356.6	351.5	347.6	398.9
Engines and turbines.....	45.1	43.6	40.8	57.6
Tractors.....	52.8	52.4	49.3	51.4
Agricultural machinery, excluding tractors.....	40.7	40.8	40.6	39.5
Machine tools.....	61.3	59.2	59.3	66.6
Machine-tool accessories.....	50.2	48.7	48.4	57.8
Textile machinery.....	32.7	31.7	32.1	24.5
Pumps and pumping equipment.....	56.9	54.6	54.7	62.5
Typewriters.....	19.4	18.2	18.4	12.8
Cash registers, adding and calculating machines.....	33.2	33.5	33.0	28.9
Washing machines, wringers and driers, domestic.....	11.5	10.3	10.7	10.9
Sewing machines, domestic and industrial.....	9.7	9.8	9.5	9.6
Refrigerators and refrigeration equipment.....	60.6	59.2	57.4	43.8
Transportation equipment, except automobiles.....	453	461	462	1,468
Locomotives.....	26.8	26.2	26.5	30.5
Cars, electric- and steam-railroad.....	46.8	45.8	42.8	55.4
Aircraft and parts, excluding aircraft engines.....	134.6	129.0	125.5	430.2
Aircraft engines.....	27.7	26.5	26.0	154.1
Shipbuilding and boatbuilding.....	158.8	175.1	183.2	647.2
Motorcycles, bicycles, and parts.....	10.7	10.5	10.3	8.4

See footnotes at end of table.



TABLE 1.—Estimated Number of Production Workers in Manufacturing Industries—Continued

Industry group and industry	Estimated number of production workers (in thousands)			
	August 1946	July 1946	June 1946	August 1945
<i>Durable goods—Continued</i>				
Automobiles.....	731	699	668	556
Nonferrous metals and their products.....	392	378	365	378
Smelting and refining, primary, of nonferrous metals.....	36.9	35.5	29.7	38.0
Alloying and rolling and drawing of nonferrous metals, except aluminum.....	61.5	59.8	57.2	61.7
Clocks and watches.....	27.5	26.1	26.7	22.8
Jewelry (precious metals) and jewelers' findings.....	17.4	16.6	17.1	13.0
Silverware and plated ware.....	14.2	13.7	13.9	10.5
Lighting equipment.....	29.9	29.1	28.1	21.6
Aluminum manufactures.....	49.1	48.3	47.6	59.0
Sheet-metal work, not elsewhere classified.....	26.4	24.9	24.8	30.8
Lumber and timber basic products.....	625	603	594	524
Sawmills and logging camps.....	235.3	229.0	226.6	215.1
Planing and plywood mills.....	73.4	70.7	70.2	65.9
Furniture and finished lumber products.....	388	376	374	330
Mattresses and bedsprings.....	21.9	20.7	20.2	17.1
Furniture.....	165.3	160.9	160.2	141.1
Wooden boxes, other than cigar.....	25.3	24.7	24.6	24.8
Caskets and other morticians' goods.....	13.1	13.1	13.4	11.6
Wood preserving.....	12.5	12.2	11.7	10.0
Wood, turned and shaped.....	22.7	22.0	22.8	21.1
Stone, clay, and glass products.....	404	390	387	317
Glass and glassware.....	103.7	100.1	101.3	87.0
Glass products made from purchased glass.....	12.0	11.5	11.9	10.0
Cement.....	29.1	28.2	27.3	18.2
Brick, tile, and terra cotta.....	63.4	62.4	58.8	41.6
Pottery and related products.....	47.2	45.6	45.4	37.7
Gypsum.....	5.8	5.5	5.1	4.1
Wallboard, plaster (except gypsum), and mineral wool.....	10.9	8.8	10.5	9.1
Lime.....	8.9	8.8	8.7	7.5
Marble, granite, slate, and other products.....	17.3	16.9	16.6	13.1
Abrasives.....	19.0	18.8	18.6	19.8
Asbestos products.....	20.0	19.1	19.2	18.8
<i>Nondurable goods</i>				
Textile-mill products and other fiber manufactures.....	1,197	1,183	1,199	1,049
Cotton manufactures, except smallwares.....	452.3	445.0	447.7	407.3
Cotton smallwares.....	14.1	13.7	14.1	13.0
Silk and rayon goods.....	92.6	90.9	91.8	85.0
Woolen and worsted manufactures, except dyeing and finishing.....	155.8	155.0	160.1	134.3
Hosiery.....	114.1	113.3	114.3	95.5
Knitted cloth.....	11.2	11.1	11.2	9.7
Knitted outerwear and knitted gloves.....	29.7	30.0	31.3	25.9
Knitted underwear.....	35.2	34.9	35.3	32.7
Dyeing and finishing textiles, including woolen and worsted.....	63.8	63.0	63.7	55.8
Carpets and rugs, wool.....	24.2	23.7	24.0	18.8
Hats, fur-felt.....	9.0	10.7	11.0	9.0
Jute goods, except felts.....	3.7	3.8	3.9	3.2
Cordage and twine.....	14.9	14.4	15.3	14.3
Apparel and other finished textile products.....	1,049	999	1,031	897
Men's clothing, not elsewhere classified.....	197.1	191.6	195.4	185.9
Shirts, collars, and nightwear.....	54.5	53.8	53.9	47.5
Underwear and neckwear, men's.....	11.9	11.3	11.8	11.3
Work shirts.....	13.3	13.3	13.7	14.0
Women's clothing, not elsewhere classified.....	211.5	195.7	212.6	190.4
Corsets and allied garments.....	15.9	15.6	16.2	13.4
Millinery.....	18.7	17.1	16.5	17.5
Handkerchiefs.....	2.3	2.2	2.3	2.5
Curtains, draperies, and bedspreads.....	13.2	13.5	13.4	10.2
Housefurnishings, other than curtains, etc.....	10.9	10.6	10.5	10.6
Textile bags.....	13.6	14.6	13.7	14.4
Leather and leather products.....	354	355	358	313
Leather.....	41.8	41.6	43.0	38.2
Boot and shoe cut stock and findings.....	18.2	17.8	18.1	16.3
Boots and shoes.....	191.4	193.3	194.2	169.1
Leather gloves and mittens.....	11.1	11.3	11.5	11.3
Trunks and suitcases.....	14.7	14.3	14.0	13.1

TABLE 1.—Estimated Number of Production Workers in Manufacturing Industries—Continued

Industry group and industry	Estimated number of production workers (in thousands)			
	August 1946	July 1946	June 1946	August 1945
<i>Nondurable goods—Continued</i>				
Food.....	1,166	1,102	1,017	1,102
Slaughtering and meat packing.....	138.4	123.4	123.3	124.3
Butter.....	26.1	26.4	26.1	24.6
Condensed and evaporated milk.....	15.0	15.7	15.7	15.8
Ice cream.....	20.2	20.9	19.8	17.3
Flour.....	29.5	28.3	26.9	30.6
Feeds, prepared.....	22.4	21.7	20.8	22.2
Cereal preparations.....	10.1	9.5	9.9	9.5
Baking.....	236.9	234.0	234.2	248.9
Sugar refining, cane.....	14.0	14.2	14.2	13.0
Sugar, beet.....	6.8	4.5	4.7	5.0
Confectionery.....	48.7	46.1	47.2	50.2
Beverages, nonalcoholic.....	25.6	25.7	24.9	26.2
Malt liquors.....	52.4	52.0	50.0	53.8
Canning and preserving.....	206.5	183.9	111.4	179.5
Tobacco manufactures.....	86	85	86	79
Cigarettes.....	33.3	33.6	33.6	33.7
Cigars.....	38.8	37.6	39.2	31.4
Tobacco (chewing and smoking) and snuff.....	7.7	7.6	7.3	8.4
Paper and allied products.....	366	361	364	311
Paper and pulp.....	167.8	166.2	167.6	143.1
Paper goods, other.....	46.2	45.5	46.4	42.1
Envelopes.....	10.3	10.2	10.5	9.2
Paper bags.....	13.8	14.1	14.3	11.4
Paper boxes.....	87.2	85.6	86.6	75.8
Printing, publishing, and allied industries.....	385	383	379	322
Newspapers and periodicals.....	131.1	130.1	129.9	109.9
Printing, book and job.....	158.7	159.5	156.4	133.2
Lithographing.....	29.1	28.8	28.7	24.1
Bookbinding.....	32.1	31.2	31.4	27.0
Chemicals and allied products.....	475	472	476	600
Paints, varnishes, and colors.....	35.9	35.6	35.3	29.0
Drugs, medicines, and insecticides.....	51.8	51.4	51.4	49.6
Perfumes and cosmetics.....	12.4	12.6	12.1	12.6
Soap.....	14.1	14.0	14.1	13.0
Rayon and allied products.....	57.3	57.0	58.4	53.1
Chemicals, not elsewhere classified.....	117.2	117.2	117.5	112.2
Explosives and safety fuses.....	12.6	12.3	12.2	80.2
Compressed and liquefied gases.....	5.9	5.8	5.8	5.9
Ammunition, small-arms.....	4.9	7.6	7.6	37.9
Fireworks.....	2.9	2.8	3.3	14.3
Cottonseed oil.....	10.9	8.4	9.0	11.5
Fertilizers.....	20.9	19.3	20.1	19.9
Products of petroleum and coal.....	152	151	149	135
Petroleum refining.....	100.1	100.1	99.1	92.9
Coke and byproducts.....	25.9	25.6	24.7	21.9
Paving materials.....	2.3	2.1	2.1	1.7
Roofing materials.....	12.2	12.0	11.8	9.3
Rubber products.....	227	218	225	191
Rubber tires and inner tubes.....	102.8	99.1	106.0	86.3
Rubber boots and shoes.....	18.0	17.5	18.1	16.4
Rubber goods, other.....	72.2	69.3	68.5	64.4
Miscellaneous industries.....	427	415	415	401
Instruments (professional and scientific) and fire-control equipment.....	22.1	22.1	21.7	49.7
Photographic apparatus.....	25.6	25.2	24.5	26.7
Optical instruments and ophthalmic goods.....	21.2	21.1	21.3	21.2
Planos, organs, and parts.....	9.4	9.1	9.0	7.4
Games, toys, and dolls.....	22.8	20.8	20.9	13.9
Buttons.....	10.6	10.1	10.3	8.9
Fire extinguishers.....	2.1	2.0	2.0	4.1

<sup>1</sup> Estimates for the major industry groups have been adjusted to levels indicated by the final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries, the sum of the individual industry estimates will not agree with the totals shown for the major industry groups.

<sup>2</sup> Revisions have been made as follows in data for earlier months:

Wire drawn from purchased rods.—March, April, and May 1946 to 25.4, 28.3, and 27.1.

Tools (except edge tools, machine tools, files, and saws).—March, April, and May 1946 to 22.5, 23.4, and 24.9.

Steam and hot-water heating apparatus and steam fittings.—May 1946, to 45.4.

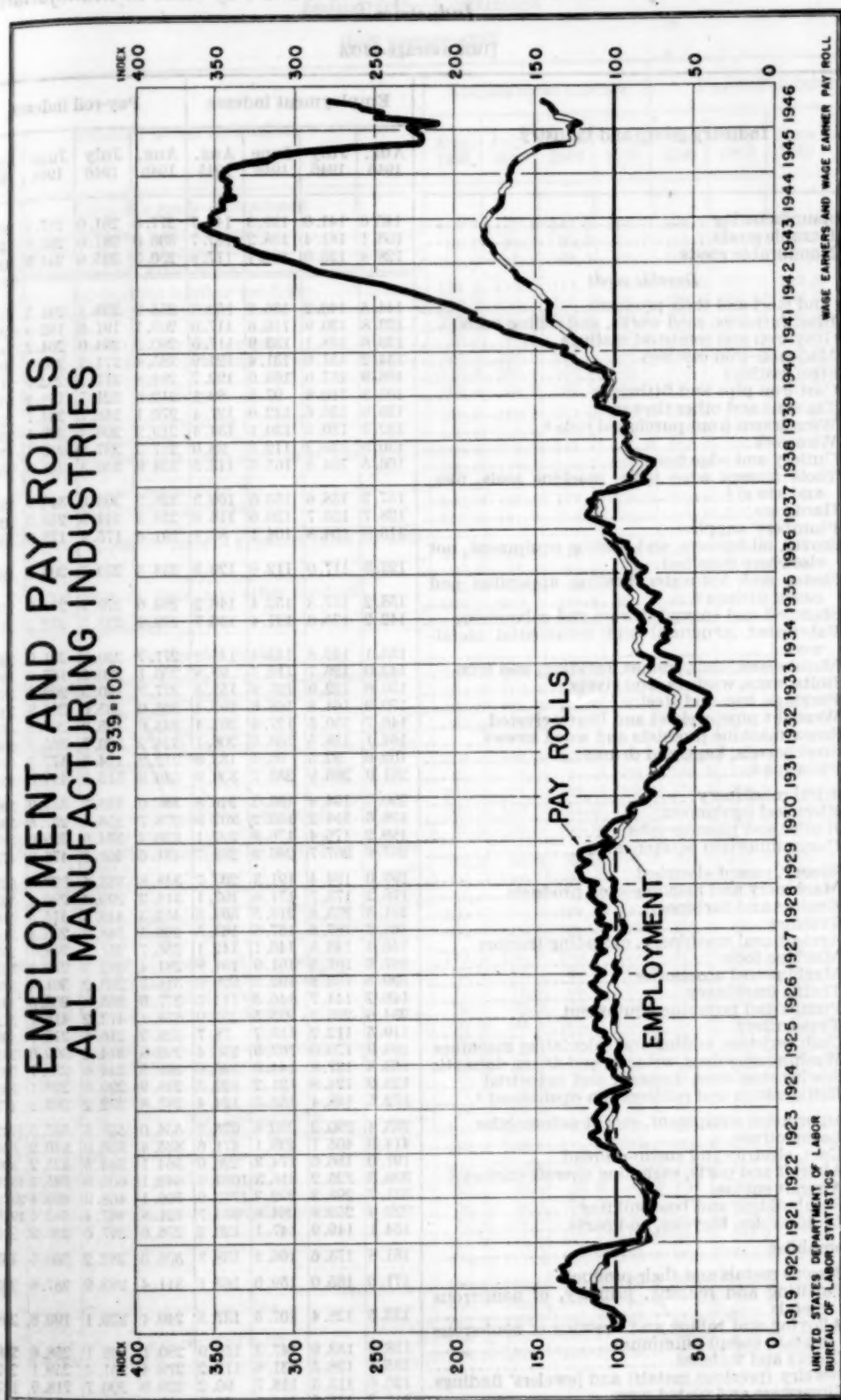




TABLE 2.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Aug. 1946	July 1946	June 1946	Aug. 1945	Aug. 1946	July 1946	June 1946	Aug. 1945
All manufacturing.....	145.0	141.0	139.3	148.7	277.8	261.0	257.1	267.3
Durable goods.....	106.1	161.4	158.2	187.7	306.0	287.0	280.7	335.4
Nondurable goods.....	128.4	125.0	124.4	117.9	250.3	235.6	234.0	200.6
<i>Durable goods</i>								
Iron and steel and their products.....	144.5	140.2	136.2	150.3	255.2	238.1	231.3	255.8
Blast furnaces, steel works, and rolling mills.....	123.8	120.9	116.6	117.6	203.1	191.8	182.0	190.2
Gray-iron and semisteel castings.....	139.6	138.1	133.9	117.5	280.5	264.0	264.2	216.9
Malleable-iron castings.....	134.2	131.6	131.4	121.9	285.4	271.3	260.9	208.2
Steel castings.....	166.9	167.0	169.0	192.7	294.8	277.1	292.3	311.4
Cast-iron pipe and fittings.....	103.3	110.8	97.8	89.1	212.6	221.7	194.2	160.2
Tin cans and other tinware.....	139.9	136.6	132.0	127.4	270.1	248.7	234.7	209.0
Wire drawn from purchased rods <sup>2</sup> .....	132.3	130.5	130.1	134.4	219.2	206.3	209.1	208.4
Wirework.....	130.0	120.2	112.7	98.0	257.3	237.2	210.7	176.1
Cutlery and edge tools.....	166.5	164.8	165.5	143.5	354.9	340.4	351.8	266.0
Tools (except edge tools, machine tools, files, and saws) <sup>2</sup> .....	167.2	158.6	165.0	160.3	326.2	303.6	316.9	282.0
Hardware.....	128.7	125.7	126.6	116.0	254.3	244.9	244.0	209.2
Plumbers' supplies.....	110.0	104.8	104.1	85.1	191.0	175.4	175.6	136.8
Stoves, oil burners, and heating equipment, not elsewhere classified.....	123.0	117.0	112.6	120.5	234.3	210.7	206.3	195.9
Steam and hot-water heating apparatus and steam fittings <sup>2</sup> .....	158.2	157.3	152.4	146.2	289.6	279.7	271.2	263.6
Stamped and enameled ware and galvanizing.....	142.2	135.8	131.4	136.7	279.9	253.5	252.1	242.9
Fabricated structural and ornamental metal-work.....	156.1	149.8	143.4	141.1	271.7	250.8	241.0	239.7
Metal doors, sash, frames, molding, and trim.....	142.0	126.7	110.7	99.8	250.7	220.5	187.6	169.6
Bolts, nuts, washers, and rivets.....	130.6	122.9	121.9	151.5	227.7	190.5	202.3	287.9
Forgings, iron and steel.....	170.9	164.8	168.6	195.4	304.0	265.0	284.9	309.8
Wrought pipe, welded and heavy riveted.....	146.7	130.5	127.6	261.4	243.6	195.0	207.5	544.8
Screw-machine products and wood screws.....	164.1	158.5	160.5	206.1	324.9	300.5	305.1	368.8
Steel barrels, kegs, and drums.....	102.6	92.5	90.4	133.0	212.2	174.6	177.3	244.0
Firearms <sup>2</sup> .....	281.0	266.9	252.7	330.9	530.8	515.9	494.3	653.5
Electrical machinery.....	200.7	194.4	193.3	246.8	360.0	333.7	333.9	399.2
Electrical equipment.....	158.6	154.2	153.2	207.9	278.7	258.4	257.5	330.2
Radios and phonographs.....	189.2	176.4	176.6	227.1	370.4	334.0	329.0	389.3
Communication equipment.....	267.9	267.7	266.9	289.7	481.6	461.3	476.0	473.8
Machinery, except electrical.....	199.0	194.4	191.3	203.7	348.8	333.5	329.5	338.4
Machinery and machine-shop products.....	176.2	173.7	171.8	197.1	314.2	299.4	296.4	323.6
Engines and turbines.....	241.5	233.8	218.5	308.5	455.3	448.3	415.5	510.8
Tractors.....	168.7	167.5	157.6	164.5	256.5	248.4	236.4	248.2
Agricultural machinery, excluding tractors.....	146.4	146.8	146.1	142.1	256.7	251.2	248.1	259.4
Machine tools.....	167.5	161.5	161.9	181.8	281.4	262.3	270.4	303.9
Machine-tool accessories.....	199.5	193.5	192.3	229.6	316.3	293.2	301.4	339.6
Textile machinery.....	149.2	144.7	146.5	111.7	277.9	265.3	265.5	191.3
Pumps and pumping equipment.....	234.6	225.2	225.5	257.9	438.4	413.2	416.1	512.3
Typewriters.....	119.5	112.2	113.7	78.7	228.2	216.5	212.7	136.4
Cash registers, adding and calculating machines.....	168.9	170.0	167.9	136.4	292.8	314.2	309.0	231.1
Washing machines, wringers and driers, domestic.....	153.8	137.8	144.0	146.6	269.5	234.6	238.7	242.9
Sewing machines, domestic and industrial.....	123.2	124.8	121.2	122.3	238.9	229.6	226.1	225.4
Refrigerators and refrigeration equipment <sup>2</sup> .....	172.5	168.4	163.3	124.4	283.8	272.2	263.2	177.6
Transportation equipment, except automobiles.....	285.4	290.2	290.8	925.2	534.0	538.5	537.5	1742.2
Locomotives.....	414.0	405.1	409.1	471.6	835.4	836.0	840.2	856.3
Cars, electric- and steam-railroad.....	191.0	186.6	174.3	226.0	364.1	343.5	325.2	396.1
Aircraft and parts, excluding aircraft engines.....	339.3	325.2	316.3	1084.4	642.1	606.9	585.5	1854.8
Aircraft engines.....	311.7	298.3	292.3	1732.9	506.1	468.9	469.4	2375.9
Shipbuilding and boatbuilding.....	229.4	252.8	264.6	934.7	421.8	467.4	483.4	1919.9
Motorcycles, bicycles, and parts.....	154.1	149.9	147.1	120.2	276.6	247.6	250.2	216.6
Automobiles.....	181.8	173.6	166.1	138.3	308.0	282.2	250.5	183.5
Nonferrous metals and their products.....	171.0	165.0	159.0	165.1	311.4	292.9	287.8	292.2
Smelting and refining, primary, of nonferrous metals.....	133.5	128.4	107.5	137.5	240.4	229.1	190.8	258.6
Alloying and rolling and drawing of nonferrous metals, except aluminum.....	158.5	153.9	147.3	159.0	280.1	269.1	268.6	289.3
Clocks and watches.....	135.5	128.5	131.6	112.2	279.4	251.4	259.1	212.5
Jewelry (precious metals) and jewelers' findings.....	120.6	115.3	118.7	90.2	230.0	200.7	218.9	147.0
Silverware and plated ware.....	117.2	112.6	114.3	86.8	232.7	213.7	221.9	151.4
Lighting equipment.....	146.1	142.1	137.0	105.6	252.4	239.2	233.3	142.7
Aluminum manufactures.....	208.3	205.3	202.4	250.4	348.7	337.4	335.9	411.9
Sheet-metal work, not elsewhere classified.....	140.6	132.6	132.1	164.2	272.1	245.0	249.5	284.4

See footnotes at end of table.

TABLE 2.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>—Continued

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Aug. 1946	July 1946	June 1946	Aug. 1945	Aug. 1946	July 1946	June 1946	Aug. 1945
<b>Durable goods—Continued</b>								
Lumber and timber basic products.....	148.7	143.4	141.3	124.7	300.3	267.0	281.0	219.3
Sawmills and logging camps.....	81.7	79.5	78.7	74.7	165.7	148.8	158.1	133.8
Planing and plywood mills.....	101.0	97.3	96.7	90.7	196.2	174.0	183.3	147.3
Furniture and finished lumber products.....	118.1	114.5	114.1	100.5	239.3	222.1	223.5	171.5
Mattresses and bedsprings.....	119.2	112.7	110.0	93.3	223.4	205.9	199.3	153.4
Furniture.....	103.9	101.1	100.6	88.6	209.7	194.2	196.2	150.4
Wooden boxes, other than cigar.....	99.7	97.6	97.2	97.8	223.0	203.4	203.0	185.5
Caskets and other morticians' goods.....	105.1	105.2	107.3	93.5	185.2	182.4	193.0	136.2
Wood preserving.....	110.9	108.4	104.5	89.0	255.1	244.7	234.9	188.3
Wood, turned and shaped.....	103.4	99.9	103.6	95.8	210.9	199.7	208.1	166.4
Stone, clay, and glass products.....	137.8	132.9	132.0	108.1	253.2	235.7	235.0	179.8
Glass and glassware.....	148.5	143.4	145.2	124.5	255.0	238.3	242.4	192.7
Glass products made from purchased glass.....	120.3	114.8	118.8	99.8	227.7	205.5	217.6	166.6
Cement.....	122.0	118.2	114.7	76.5	207.0	196.1	184.0	128.0
Brick, tile, and terra cotta.....	111.7	109.9	103.6	73.2	219.8	210.5	195.6	118.2
Pottery and related products.....	142.6	137.9	137.0	113.9	252.4	229.0	238.9	173.3
Gypsum.....	117.6	111.4	104.2	82.1	226.9	197.6	191.3	139.6
Wallboard, plaster (except gypsum), and mineral wool.....	134.9	108.6	128.9	112.3	280.0	215.7	255.5	200.1
Lime.....	93.7	93.1	91.5	79.0	216.5	201.0	196.9	158.7
Marble, granite, slate, and other products.....	93.4	91.2	89.6	70.6	154.8	147.0	144.6	102.4
Abrasives.....	246.1	243.4	241.0	255.8	407.7	404.5	399.1	443.6
Asbestos products.....	126.1	120.2	120.6	118.4	272.1	252.4	250.6	242.5
<b>Nondurable goods</b>								
Textile-mill products and other fiber manufactures.....	104.7	103.5	104.8	91.7	231.0	214.7	218.6	162.1
Cotton manufactures, except smallwares.....	114.2	112.4	113.0	102.9	275.5	246.1	248.2	192.9
Cotton smallwares.....	105.8	103.0	105.9	97.9	220.3	207.6	207.0	182.3
Silk and rayon goods.....	77.2	75.9	76.6	70.9	181.4	166.3	166.8	133.9
Woolen and worsted manufactures, except dyeing and finishing.....	104.4	103.9	107.3	90.0	234.1	228.6	238.5	167.2
Hosiery.....	71.7	71.2	71.9	60.0	141.3	130.9	133.0	89.0
Knitted cloth.....	102.4	101.2	102.5	89.1	213.1	209.0	213.2	155.4
Knitted underwear and knitted gloves.....	105.8	106.8	111.2	92.0	220.1	216.7	235.5	160.3
Knitted underwear.....	91.2	90.6	91.6	85.0	196.1	189.7	189.7	153.1
Dyeing and finishing textiles including woolen and worsted.....	95.4	94.2	95.2	83.5	187.6	178.8	184.5	139.6
Carpets and rugs, wool.....	94.7	92.7	93.7	73.6	173.0	165.2	169.5	111.6
Hats, fur-felt.....	61.8	73.7	75.7	62.0	139.1	153.3	160.0	112.4
Fur goods, except felts.....	103.7	104.9	108.1	90.1	225.8	217.2	224.5	174.4
Cordage and twine.....	122.8	118.8	126.5	118.3	255.9	229.3	246.1	217.2
Apparel and other finished textile products.....	132.9	126.5	130.6	113.6	277.5	245.7	263.3	180.6
Men's clothing, not elsewhere classified.....	90.2	87.6	89.4	85.0	183.1	167.9	181.2	135.0
Shirts, collars, and nightwear.....	77.3	76.4	76.5	67.5	162.7	155.3	159.6	110.9
Underwear and neckwear, men's.....	73.8	70.2	72.8	70.1	173.8	157.9	167.3	124.1
Work shirts.....	99.0	99.1	101.6	103.9	213.2	202.9	213.3	186.5
Women's clothing, not elsewhere classified.....	77.9	72.1	78.3	70.1	169.8	141.3	159.0	108.4
Corsets and allied garments.....	84.6	82.9	86.1	71.6	167.2	158.6	170.3	119.1
Millinery.....	76.9	70.3	68.0	72.1	137.8	122.5	105.0	112.7
Handkerchiefs.....	47.5	46.1	47.4	51.2	103.2	93.2	98.8	94.3
Curtains, draperies, and bedspreads.....	78.3	79.8	79.1	60.4	164.5	168.5	173.5	116.8
Housefurnishings, other than curtains, etc.....	103.0	100.2	99.1	100.1	213.5	198.3	183.6	171.4
Textile bags.....	113.7	122.1	114.0	120.1	203.2	208.1	207.6	193.2
Leather and leather products.....	102.0	102.3	103.1	90.2	198.2	197.3	203.4	159.9
Leather.....	88.4	88.1	90.9	80.9	160.1	150.5	163.0	141.2
Boot and shoe cut stock and findings.....	96.6	94.3	96.0	86.3	179.7	167.1	173.3	141.8
Boots and shoes.....	87.8	88.6	89.1	77.6	175.4	177.6	183.0	141.2
Leather gloves and mittens.....	111.2	113.2	115.3	113.3	215.0	217.5	221.4	181.9
Trunks and suitcases.....	176.8	171.4	168.2	156.8	332.9	304.8	314.7	243.9
Food.....	136.5	129.0	119.0	129.0	250.3	231.5	205.0	205.6
Slaughtering and meat packing.....	114.8	102.4	106.5	103.2	202.3	179.9	167.4	158.2
Butter.....	145.4	146.9	145.6	137.1	263.7	267.6	257.9	226.3
Condensed and evaporated milk.....	154.9	162.1	162.1	162.6	293.2	305.9	311.3	280.5
Ice cream.....	128.8	132.7	126.3	109.9	215.7	221.7	203.6	161.5

See footnotes at end of table.

TABLE 2.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>—Continued

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Aug. 1946	July 1946	June 1946	Aug. 1945	Aug. 1946	July 1946	June 1946	Aug. 1945
<b>Nondurable goods—Continued</b>								
<b>Food—Continued</b>								
Flour	119.1	114.3	108.7	123.5	240.9	221.1	190.9	210.9
Feeds, prepared	145.7	140.6	135.0	144.3	275.2	251.0	230.7	244.9
Cereal preparations	135.1	127.4	133.2	126.8	244.4	219.5	238.6	225.6
Baking	102.7	101.4	101.5	107.9	184.1	178.5	168.8	170.9
Sugar refining, cane	98.8	100.0	100.5	92.1	162.5	167.5	162.4	140.0
Sugar, beet	64.8	43.6	45.2	48.2	107.2	72.0	70.6	72.8
Confectionery	97.9	92.7	94.8	101.0	186.3	170.0	180.4	165.7
Beverages, nonalcoholic	120.6	120.8	117.1	123.0	185.0	186.1	172.1	166.6
Malt liquors	145.2	144.0	141.1	149.1	232.3	222.3	210.1	224.2
Canning and preserving	153.5	136.8	82.8	133.5	387.4	325.8	181.9	249.4
<b>Tobacco manufactures</b>	91.7	90.7	92.1	84.3	186.2	178.3	184.1	149.3
Cigarettes	121.3	122.5	122.6	122.9	218.0	211.1	217.8	193.9
Cigars	76.1	73.9	77.0	61.6	168.2	160.1	167.8	114.6
Tobacco (chewing and smoking) and snuff	83.6	83.1	79.3	91.6	149.3	140.5	135.7	148.8
<b>Paper and allied products</b>	137.8	135.9	137.3	117.0	253.9	243.8	244.4	189.2
Paper and pulp	122.1	120.9	121.9	104.1	227.8	218.4	216.7	171.7
Paper goods, other	122.7	120.8	123.4	111.9	216.4	211.8	218.1	180.2
Envelopes	118.5	116.8	120.4	105.4	206.4	198.4	210.4	160.4
Paper bags	124.3	127.3	128.9	102.8	229.2	236.5	233.9	169.7
Paper boxes	126.1	123.8	125.2	109.6	234.1	222.6	225.5	171.1
<b>Printing, publishing, and allied industries</b>	117.3	116.8	115.7	98.3	190.5	186.0	184.2	140.0
Newspapers and periodicals	110.4	109.6	109.4	92.6	168.8	163.7	162.0	128.6
Printing, book and job	125.6	126.3	123.8	105.4	211.1	209.1	204.6	151.9
Lithographing	112.0	110.8	110.2	92.8	182.6	173.2	176.3	130.6
Bookbinding	124.4	121.0	121.8	104.7	250.9	240.7	247.7	176.1
<b>Chemicals and allied products</b>	164.9	163.7	165.1	208.3	290.5	286.9	285.1	357.2
Paints, varnishes, and colors	127.6	126.6	125.3	103.0	204.2	199.5	199.7	163.0
Drugs, medicines, and insecticides	189.2	187.5	187.5	181.1	314.0	307.0	305.8	270.7
Perfumes and cosmetics	119.7	121.4	116.8	121.2	190.3	191.4	186.5	165.5
Soap	103.8	103.2	103.5	95.6	171.7	170.2	172.8	160.3
Rayon and allied products	118.7	118.0	121.0	110.0	206.2	197.6	198.3	181.6
Chemicals, not elsewhere classified	168.5	168.4	169.0	161.2	288.0	289.2	283.0	288.2
Explosives and safety fuses	173.1	169.8	168.7	1105.4	272.6	264.5	265.9	1607.4
Compressed and liquefied gases	148.1	145.9	146.2	148.0	248.4	238.8	239.4	265.5
Ammunition, small-arms	115.6	178.0	178.0	889.1	201.4	335.7	331.3	1469.9
Fireworks	254.7	244.4	282.9	1237.0	623.1	622.1	708.5	3258.6
Cottonseed oil	71.4	55.6	59.4	75.6	160.1	119.8	126.8	145.5
Fertilizers	111.5	102.7	107.2	106.2	275.4	246.4	249.7	241.8
<b>Products of petroleum and coal</b>	143.4	142.7	140.6	128.0	246.3	244.3	236.0	229.8
Petroleum refining	137.4	137.4	136.1	127.5	228.7	228.0	223.3	224.3
Coke and byproducts	119.2	117.8	113.9	100.8	216.8	215.1	194.7	189.4
Paving materials	92.5	86.7	85.4	70.4	189.2	174.2	170.4	135.1
Roofing materials	151.3	149.4	146.7	116.0	292.3	279.5	277.0	205.5
<b>Rubber products</b>	187.5	180.2	186.1	158.0	343.2	327.2	337.2	265.7
Rubber tires and inner tubes	189.9	183.1	195.8	159.3	311.2	304.3	318.3	249.7
Rubber boots and shoes	121.3	118.4	122.2	110.6	240.2	226.6	244.8	203.9
Rubber goods, other	139.6	133.8	132.3	124.4	278.6	255.9	255.2	212.8
<b>Miscellaneous industries</b>	174.4	169.6	169.4	163.9	328.2	313.1	315.9	293.7
Instruments (professional and scientific) and fire-control equipment	200.1	200.2	196.7	449.4	346.7	343.0	339.4	797.9
Photographic apparatus	148.3	145.9	141.6	154.6	244.6	240.0	233.3	250.1
Optical instruments and ophthalmic goods	182.1	181.8	183.0	182.1	316.5	314.9	314.2	283.0
Pianos, organs, and parts	122.9	118.9	118.0	96.7	230.8	213.7	220.4	164.2
Games, toys, and dolls	122.1	111.3	112.0	74.7	252.1	222.1	222.7	116.5
Buttons	96.3	92.2	93.5	80.9	208.2	195.2	203.0	148.1
Fire extinguishers	209.1	202.1	200.0	411.3	405.8	397.1	406.4	786.8

<sup>1</sup> Indexes for the major industry groups have been adjusted to levels indicated by the final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency.<sup>2</sup> Revisions have been made as follows in the indexes for earlier months:

Wire drawn from purchased rods.—March, April, and May 1946 employment to 115.7, 128.6, and 123.4; pay roll to 178.8, 200.0, and 191.9.

Tools (except edge tools, machine tools, files, and saws).—March, April, and May 1946 employment to 147.2, 153.1, and 162.6; pay roll to 278.7, 285.9, and 309.6.

Steam and hot-water heating apparatus and steam fittings.—May 1946 employment to 149.9; pay roll to 269.8.

Firearms.—May 1946 pay roll to 501.7.

Refrigerators and refrigeration equipment.—May 1946 pay roll to 257.2.



TABLE 3.—Estimated Number of Employees in Selected Nonmanufacturing Industries

Industry group and industry	Estimated number of employees in thousands			
	August 1946	July 1946	June 1946	August 1945
Mining: <sup>1</sup>				
Anthracite.....	67.9	67.5	65.5	64.1
Bituminous coal <sup>2</sup> .....	336	332	332	323
Metal.....	73.8	68.8	65.6	64.5
Iron.....	28.1	27.4	26.8	24.1
Copper.....	21.2	20.4	14.7	19.4
Lead and zinc.....	14.8	11.5	14.7	13.2
Gold and silver.....	7.2	7.0	7.1	5.2
Miscellaneous.....	2.5	2.5	2.3	2.6
Telephone.....	575	565	545	423
Telegraph <sup>3</sup> .....	42.1	42.3	42.2	45.0
Electric light and power.....	249	247	244	205
Street railways and busses.....	252	250	249	227
Hotels (year-round).....	384	384	387	354
Power laundries.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Cleaning and dyeing.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Class I steam railroads <sup>5</sup> .....	1,368	1,349	1,330	1,449
Water transportation <sup>6</sup> .....	119	120	120	164

<sup>1</sup> Data are for production workers only.<sup>2</sup> Revisions have been made as follows in the data for earlier months:

Bituminous coal.—May 1946 to 248.

<sup>3</sup> Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.<sup>4</sup> The change in definition from "wage earner" to "production worker" in the power laundries and cleaning and dyeing industries results in the omission of driver-salesmen. This causes a significant difference in the data. New series are being prepared.<sup>5</sup> Source: Interstate Commerce Commission.<sup>6</sup> Based on estimates prepared by the U. S. Maritime Commission, covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to or owned by the Army or Navy.

TABLE 4.—Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries

[1939 average = 100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Aug. 1946	July 1946	June 1946	Aug. 1945	Aug. 1946	July 1946	June 1946	Aug. 1945
Mining:								
Anthracite.....	82.0	81.4	79.0	77.4	193.3	156.5	182.7	148.0
Bituminous coal <sup>1</sup> .....	90.7	89.5	89.6	87.1	238.9	198.4	243.8	188.0
Metal.....	83.7	78.0	74.4	73.1	148.5	132.4	126.9	114.2
Iron.....	139.8	135.9	132.8	119.4	254.5	247.9	239.5	200.8
Copper.....	88.8	85.6	61.8	81.3	164.1	153.8	106.8	120.8
Lead and zinc.....	95.4	74.2	94.7	85.0	193.1	128.5	180.5	157.2
Gold and silver.....	29.0	28.5	28.8	21.2	42.5	38.5	41.6	26.1
Miscellaneous.....	63.7	62.5	58.4	66.0	103.0	96.7	95.5	105.2
Quarrying and nonmetallic.....	103.2	101.2	98.9	81.7	225.1	213.6	207.7	155.9
Crude petroleum production <sup>2</sup> .....	95.5	95.4	94.2	84.2	152.6	151.3	147.1	139.2
Public utilities:								
Telephone.....	181.1	177.7	171.7	133.1	267.6	268.8	259.9	195.7
Telegraph.....	111.9	112.4	112.1	119.4	178.5	178.6	174.9	200.4
Electric light and power.....	101.9	101.2	99.9	84.1	152.4	150.2	148.4	120.7
Street railways and busses.....	130.0	128.9	128.7	117.3	211.3	206.7	199.5	178.7
Wholesale trade.....	109.1	107.5	106.9	95.8	177.3	174.5	172.6	141.3
Retail trade.....	106.7	106.3	107.2	93.8	174.6	172.6	171.3	132.0
Food.....	103.6	101.3	103.5	99.9	177.3	171.5	170.0	144.7
General merchandise.....	117.4	117.6	121.0	104.7	188.1	187.1	188.8	141.2
Apparel.....	105.8	107.8	114.3	96.7	175.9	177.5	186.9	139.6
Furniture and housefurnishings.....	79.5	78.1	77.6	61.7	129.9	129.2	126.6	88.8
Automotive.....	94.4	93.4	91.3	69.6	160.1	156.8	152.9	104.6
Lumber and building materials.....	112.6	111.1	109.4	91.8	186.1	180.1	177.2	133.3
Hotels (year-round) <sup>3</sup> .....	119.1	119.0	119.9	109.9	208.6	204.5	205.0	172.0
Power laundries.....	111.5	113.6	112.3	106.1	188.3	193.3	190.9	160.5
Cleaning and dyeing.....	124.5	130.0	131.6	117.3	216.9	231.3	236.6	179.9
Class I steam railroads <sup>4</sup> .....	138.5	136.6	134.6	146.7	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Water transportation <sup>6</sup> .....	225.9	228.2	229.0	313.4	478.8	490.1	467.4	664.0

<sup>1</sup> Revisions have been made as follows in the indexes for earlier months:

Bituminous coal.—May 1946 employment to 66.9; pay roll to 97.4.

<sup>2</sup> Does not include well drilling or rig building.<sup>3</sup> Cash payments only; additional value of board, room, and tips, not included.<sup>4</sup> Source: Interstate Commerce Commission.<sup>5</sup> Not available.<sup>6</sup> Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to or owned by the Army or Navy.

## Labor Turn-Over in Manufacturing, Mining, and Public Utilities, August 1946

THE over-all hiring rate in manufacturing industries in August 1946, a year after VJ-day, was 68 per 1,000 employees, a rate closer to that for wartime than for the prewar period. Women were hired at a higher rate than men in 14 out of the 19 major industry groups, and and at the same rate in 2 others.

The lumber industry, vitally concerned with the building program, had one of the highest accession rates in manufacturing—100 per 1,000 employees. The closely related furniture group had 106 per 1,000, the highest of any industry.

TABLE 1.—*Monthly Labor Turn-Over Rates (Per 100 Employees) in Manufacturing Industries*<sup>1</sup>

Class of turn-over and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total separation:</b>												
1946.....	6.8	6.3	6.6	6.3	6.3	5.7	5.9	<sup>2</sup> 6.8				
1945.....	6.2	6.0	6.8	6.6	7.0	7.9	7.7	17.9	12.0	8.6	7.1	5.9
1943.....	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939.....	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
<b>Quit:</b>												
1946.....	4.3	3.9	4.2	4.3	4.2	4.0	4.5	<sup>2</sup> 5.1				
1945.....	4.6	4.3	5.0	4.8	4.8	5.1	5.2	6.2	6.7	5.6	4.7	4.0
1943.....	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939.....	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
<b>Discharge:</b>												
1946.....	.5	.5	.4	.4	.4	.3	.4	<sup>2</sup> .4				
1945.....	.7	.7	.7	.6	.6	.7	.6	.7	.6	.5	.5	.4
1943.....	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
<b>Lay-off:<sup>3</sup></b>												
1946.....	1.8	1.7	1.8	1.4	1.5	1.2	.8	<sup>2</sup> 1.1				
1945.....	.6	.7	.7	.8	1.2	1.7	1.5	10.7	4.5	2.3	1.7	1.3
1943.....	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939.....	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
<b>Military and miscellaneous:<sup>4</sup></b>												
1946.....	.2	.2	.2	.2	.2	.2	.2	<sup>2</sup> .2				
1945.....	.3	.3	.4	.4	.4	.4	.4	.3	.2	.2	.2	.2
1943.....	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
<b>Accession:</b>												
1946.....	8.5	6.8	7.1	6.7	6.1	6.7	7.8	<sup>2</sup> 6.8				
1945.....	7.0	5.0	4.9	4.7	5.0	5.9	5.8	5.9	7.4	8.6	8.7	6.9
1943.....	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939.....	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8

<sup>1</sup> Month-to-month employment changes as indicated by labor turn-over rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month while the latter refer, for the most part, to a one-week period ending nearest the middle of the month. In addition, labor turn-over data, beginning in January 1943, refer to all employees, whereas the employment and pay-roll reports relate only to production workers. The turn-over sample is not so extensive as that of the employment and pay-roll survey—proportionately fewer small plants are included; printing and publishing, and certain seasonal industries, such as canning and preserving, are not covered.

<sup>2</sup> Preliminary.

<sup>3</sup> Including temporary (of more than 7 days duration), indeterminate, and permanent lay-offs.

<sup>4</sup> Miscellaneous separations comprise not more than 0.1 in these figures. In 1939 these data were included with quits.

The accession rate for women was higher than that for men in 5 of the 9 durable goods groups. For the entire heavy goods component, women were hired at a rate of 75 per 1,000 women employed, while the rate for men was 70 per 1,000 men employed. In the nondurable goods groups, where more women were employed, women had a higher

accession rate than men in 9 of the 10 groups and the same rate as men in the remaining group. The hiring rate for men was 58 in these groups in August, while that for women was 75 per 1,000.

Separation rates in August also approximated wartime levels. For every 1,000 workers on factory pay rolls, 51 quit, 11 were laid off, 4 were discharged, and 2 left for other reasons. The phenomenal lay-off rate in the meat-packing industry—84 per 1,000—reflects stringent livestock shortages at the plants. This high lay-off rate combined with an extremely high quit rate of 56 per 1,000, resulted in a total separation rate in this industry which was the highest since December 1942.

The separation rate for women was higher than that for men, reflecting higher quits. In the electrical machinery group alone, the quit rate for women was 63 per 1,000 as compared with 29 for men. The involuntary separation rate continued lower for women than for men.

TABLE 2.—Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries,<sup>1</sup> August 1946<sup>2</sup>

Industry group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July
<i>Manufacturing</i>												
Durable goods.....	6.5	5.9	5.1	4.5	0.5	0.4	0.7	0.8	0.2	0.2	7.1	7.9
Nondurable goods.....	7.2	5.8	5.1	4.5	.4	.3	1.5	.8	.2	.2	6.5	7.7
Iron and steel and their products.....	5.2	4.8	4.2	3.8	.4	.3	.4	.4	.2	.2	5.9	6.7
Blast furnaces, steel works, and rolling mills.....	3.8	3.7	3.2	2.9	.2	.1	.2	.4	.2	.3	4.1	4.8
Gray-iron castings.....	9.7	7.7	7.8	6.3	1.0	.8	.3	.2	.6	.4	10.5	9.4
Malleable-iron castings.....	8.1	7.6	7.2	6.7	.5	.5	.2	.1	.2	.3	8.7	8.3
Steel castings.....	5.1	5.7	3.9	3.0	.6	.4	.4	2.0	.2	.3	5.7	4.5
Cast-iron pipe and fittings.....	5.7	6.5	4.4	6.3	.1	( <sup>3</sup> )	1.1	.1	.1	.1	7.1	11.9
Tin cans and other tinware.....	14.6	10.0	9.4	7.6	2.5	1.9	2.6	.3	.1	.2	9.2	14.4
Wire products.....	3.2	3.6	2.4	3.0	.3	.3	.3	.1	.2	.2	4.2	6.6
Cutlery and edge tools.....	6.2	5.4	4.9	4.4	.7	.6	.5	.3	.1	.1	7.9	7.4
Tools (except edge tools, machine tools, files, and saws).....	6.0	4.8	5.2	3.9	.5	.5	.1	.1	.2	.3	6.5	6.1
Hardware.....	6.9	5.9	6.0	5.1	.4	.5	.3	.2	.2	.1	8.0	7.5
Stoves, oil burners, and heating equipment.....	7.8	6.9	6.4	5.6	1.0	.7	.3	.4	.1	.2	11.1	13.1
Steam and hot-water heating apparatus and steam fittings.....	5.9	5.6	4.5	4.4	.6	.5	.5	.5	.3	.2	8.7	7.7
Stamped and enameled ware and galvanizing.....	8.6	8.0	7.4	6.7	.6	.6	.4	.5	.2	.2	10.4	11.5
Fabricated structural-metal products.....	6.3	5.8	4.9	4.0	.5	.5	.7	.7	.2	.6	8.9	8.9
Bolts, nuts, washers, and rivets.....	4.5	3.6	3.9	2.8	.1	.2	.3	.2	.3	.4	4.9	4.6
Forgings, iron and steel.....	5.3	4.7	3.8	3.9	.3	.2	1.1	.5	.1	.1	5.1	8.1
Electrical machinery.....	5.3	4.6	4.2	3.5	.4	.4	.5	.5	.2	.2	6.8	6.7
Electrical equipment for industrial use.....	3.9	3.7	3.2	2.8	.2	.3	.3	.5	.2	.1	4.8	4.9
Radios, radio equipment, and phonographs.....	7.0	6.4	5.6	5.0	.7	.6	.5	.6	.2	.2	9.3	9.0
Communication equipment, except radios.....	4.2	2.4	3.0	1.4	.1	.1	.9	.7	.2	.2	5.2	3.5

See footnotes at end of table.



TABLE 2.—Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries,<sup>1</sup> August 1946 <sup>2</sup>—Continued

Industry group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July
<b>Manufacturing—Continued</b>												
Machinery, except electrical.....	4.6	4.0	3.7	3.1	0.4	0.4	0.3	0.4	0.2	0.1	5.2	5.7
Engines and turbines.....	5.0	4.2	3.5	3.2	.5	.3	.9	.6	.1	.1	5.6	7.6
Agricultural machinery and tractors.....	4.5	4.8	3.9	3.9	.2	.3	.2	.4	.2	.2	4.7	6.1
Machine tools.....	3.3	2.4	2.5	1.8	.3	.2	.3	.2	.2	.2	3.2	3.4
Machine-tool accessories.....	4.6	3.6	3.7	2.9	.5	.3	.3	.3	.1	.1	5.3	5.8
Metalworking machinery and equipment, not elsewhere classified.....	4.6	3.7	3.7	2.9	.4	.3	.3	.3	.2	.2	4.7	4.5
General industrial machinery, except pumps.....	5.0	4.0	4.1	3.0	.4	.4	.4	.5	.1	.1	5.4	5.1
Pumps and pumping equipment.....	5.3	3.8	4.3	2.9	.7	.5	.2	.2	.1	.2	6.3	6.3
Transportation equipment, except automobiles.....	8.9	9.2	4.0	3.9	.5	.6	4.3	4.6	.1	.1	7.2	8.2
Aircraft.....	5.3	5.0	3.9	3.5	.4	.4	.9	1.0	.1	.1	7.6	8.2
Aircraft parts, including engines.....	5.4	4.5	3.0	2.3	.4	.4	1.9	1.7	.1	.1	5.0	6.1
Shipbuilding and repairs.....	15.2	15.1	4.9	5.0	.8	.8	9.4	9.2	.1	.1	7.8	9.0
Automobiles.....	7.0	6.3	5.4	5.5	.5	.4	.9	.3	.2	.1	8.4	11.0
Motor vehicles, bodies, and trailers.....	7.4	6.9	5.8	6.1	.6	.4	.9	.3	.1	.1	8.3	11.3
Motor-vehicle parts and accessories.....	6.0	4.8	4.5	3.8	.5	.4	.7	.4	.3	.2	8.7	10.0
Nonferrous metals and their products.....	6.1	5.7	5.0	4.4	.5	.6	.5	.5	.1	.2	6.9	7.3
Primary smelting and refining, except aluminum and magnesium.....	4.5	5.1	3.6	4.2	.4	.4	.4	.3	.1	.2	5.4	6.9
Rolling and drawing of copper and copper alloys.....	5.2	4.5	4.4	3.9	.5	.3	.1	.2	.2	.1	5.8	5.4
Lighting equipment.....	7.6	7.1	6.2	6.0	.5	.6	.8	.4	.1	.1	7.9	11.1
Nonferrous-metal foundries, except aluminum and magnesium.....	6.1	5.9	4.8	4.1	.7	.8	.4	.8	.2	.2	6.3	6.2
Lumber and timber basic products.....	10.5	9.0	9.6	8.0	.5	.4	.3	.5	.1	.1	10.0	11.0
Sawmills.....	10.9	9.0	10.0	8.1	.5	.4	.3	.4	.1	.1	10.1	10.5
Planing and plywood mills.....	7.3	6.2	6.5	5.5	.4	.4	.3	.2	.1	.1	7.0	8.5
Furniture and finished lumber products.....	9.4	8.2	8.4	7.1	.7	.6	.2	.3	.1	.2	10.6	10.3
Furniture, including mattresses and bedsprings.....	9.7	8.4	8.5	7.3	.8	.6	.3	.3	.1	.2	10.8	10.4
Stone, clay, and glass products.....	5.5	5.6	4.6	4.4	.5	.5	.2	.5	.2	.2	6.7	7.9
Glass and glass products.....	5.1	5.5	4.1	3.8	.5	.5	.3	.9	.2	.3	6.6	7.8
Cement.....	7.1	6.4	6.3	5.5	.5	.6	.1	.2	.2	.1	8.8	9.5
Brick, tile, and terra cotta.....	7.6	7.5	6.1	6.3	.8	.9	.6	.2	.1	.1	8.8	9.6
Pottery and related products.....	4.4	4.5	3.8	3.9	.4	.4	.1	.1	.1	.1	4.9	7.0
Textile-mill products.....	6.0	6.3	5.2	5.5	.4	.3	.3	.3	.1	.2	6.4	6.5
Cotton.....	7.0	7.4	6.2	6.8	.4	.3	.2	.1	.2	.2	7.4	7.7
Silk and rayon goods.....	5.6	5.4	4.9	4.7	.4	.3	.2	.2	.1	.2	6.2	6.0
Woolen and worsted, except dyeing and finishing.....	5.0	5.0	4.1	4.1	.4	.4	.3	.3	.2	.2	5.0	4.8
Hosiery, full-fashioned.....	4.5	3.7	4.0	3.3	.2	.2	.1	.1	(?)	.1	4.1	4.1
Hosiery, seamless.....	6.8	5.5	6.3	5.3	.2	.1	.2	.1	.1	(?)	6.4	5.9
Knitted underwear.....	6.5	5.2	5.9	4.8	.4	.3	.1	.1	.1	(?)	6.8	6.3
Dyeing and finishing textiles, including woolen and worsted.....	4.7	4.1	3.7	3.0	.6	.4	.2	.2	.2	.5	5.0	4.8
Apparel and other finished textile products.....	7.0	6.4	6.5	5.9	.2	.2	.2	.2	.1	.1	7.0	6.5
Men's and boys' suits, coats, and overcoats.....	4.8	4.5	4.5	4.2	.1	.1	.2	.2	(?)	(?)	5.4	4.4
Men's and boys' furnishings, work clothing, and allied garments.....	6.7	6.3	6.2	5.9	.2	.2	.2	.1	.1	.1	6.6	6.2

See footnotes at end of table.

TABLE 2.—Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries,<sup>1</sup> August 1946 <sup>2</sup>—Continued

Industry group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July
<i>Manufacturing—Continued</i>												
Leather and leather products.....	5.8	5.5	5.3	4.7	0.2	0.2	0.2	0.5	0.1	0.1	4.8	5.3
Leather.....	4.9	4.8	3.7	3.3	.2	.2	.9	1.2	.1	.1	3.4	3.4
Boots and shoes.....	6.1	5.5	5.7	4.9	.2	.2	.1	.3	.1	.1	5.1	5.6
Food and kindred products.....	11.4	7.2	5.4	4.4	.6	.4	5.2	2.2	.2	.2	8.7	13.3
Meat products.....	15.0	8.7	5.6	3.4	.7	.4	8.4	4.6	.3	.3	9.1	20.1
Grain-mill products.....	8.3	8.7	5.4	5.8	.9	.7	2.0	2.1	( <sup>3</sup> )	.1	7.5	13.0
Tobacco manufactures.....	7.3	6.2	6.0	5.1	.4	.3	.8	.7	.1	.1	7.7	9.0
Paper and allied products.....	6.9	6.0	5.9	5.0	.6	.5	.2	.3	.2	.2	6.9	6.9
Paper and pulp.....	5.8	5.3	4.9	4.3	.5	.5	.2	.3	.2	.2	5.7	6.0
Paper boxes.....	9.7	7.6	8.5	6.7	.9	.7	.1	( <sup>3</sup> )	.2	.2	9.6	9.0
Chemicals and allied products.....	3.7	3.5	3.0	2.7	.3	.3	.2	.3	.2	.2	4.2	4.8
Paints, varnishes, and colors.....	3.8	3.4	3.2	2.5	.4	.4	.1	.3	.1	.2	4.5	4.7
Rayon and allied products.....	3.1	3.3	2.4	2.6	.2	.3	.2	.2	.3	.2	3.3	3.7
Industrial chemicals, except explosives.....	4.0	3.7	3.2	2.8	.4	.4	.3	.3	.1	.2	4.9	5.5
Products of petroleum and coal.....	2.3	2.0	1.7	1.3	.2	.2	.2	.4	.2	.1	2.3	2.8
Petroleum refining.....	1.9	1.8	1.5	1.2	.1	.1	.1	.4	.2	.1	2.1	2.6
Rubber products.....	5.0	4.4	4.4	3.8	.3	.3	.1	.1	.2	.2	5.8	5.7
Rubber tires and inner tubes.....	3.6	3.4	3.3	3.0	.2	.2	( <sup>3</sup> )	.1	.1	.1	4.9	4.7
Rubber footwear and related products.....	6.7	5.4	6.0	4.7	.3	.2	.2	.2	.2	.3	7.1	6.0
Miscellaneous rubber industries.....	6.7	5.6	5.6	4.7	.5	.5	.4	.2	.2	.2	6.9	7.4
Miscellaneous industries.....	4.8	4.4	3.5	3.1	.3	.4	.8	.7	.2	.2	4.9	5.8
<i>Nonmanufacturing</i>												
Metal mining.....	6.1	6.0	5.2	4.7	.4	.4	.2	.6	.3	.3	6.2	7.2
Iron ore.....	3.3	2.2	2.4	1.5	.2	.2	.2	.2	.5	.3	3.0	4.0
Copper ore.....	7.9	8.4	7.0	7.3	.6	.6	.2	.3	.1	.2	8.2	10.1
Lead and zinc ore.....	6.7	7.2	5.9	4.8	.5	.4	.2	1.8	.1	.2	7.3	6.1
Coal mining:												
Anthracite mining.....	1.9	1.7	1.4	1.5	.1	( <sup>3</sup> )	.3	.1	.1	.1	2.1	2.7
Bituminous-coal mining.....	4.0	4.0	3.5	3.3	.2	.2	.1	.2	.2	.3	4.4	4.8
Public utilities:												
Telephone.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Telegraph.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )

<sup>1</sup> Since January 1943 manufacturing firms reporting labor turn-over have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample, comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products.

<sup>2</sup> Preliminary.

<sup>3</sup> Less than 0.05.

<sup>4</sup> Not available.

TABLE 3.—*Monthly Labor Turn-Over Rates (Per 100 Employees) for Men and Women in All Manufacturing and Selected Groups,<sup>1</sup> August 1946<sup>2</sup>*

Industry group	Total separation				Quit				Accession			
	Men		Women		Men		Women		Men		Women	
	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July
	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July	Aug.	July
All manufacturing.....	6.4	5.4	7.5	6.6	4.6	4.1	6.2	5.6	6.5	7.8	7.5	7.5
Durable goods.....	6.3	5.7	7.0	5.9	5.0	4.4	5.6	4.7	7.0	7.9	7.5	7.6
Nondurable goods.....	6.5	5.0	7.7	6.8	4.1	3.6	6.4	5.9	5.8	7.7	7.5	7.5
Iron and steel and their products.....	5.2	4.7	6.8	6.5	4.2	3.7	5.5	5.2	6.1	6.9	6.9	7.6
Electrical machinery.....	3.8	3.6	7.7	6.1	2.9	2.6	6.3	4.9	5.6	5.7	8.8	8.5
Machinery, except electrical.....	4.4	3.8	5.7	4.5	3.5	3.0	4.6	3.5	5.1	5.7	5.3	5.5
Transportation equipment, except automobiles.....	8.9	8.6	6.1	5.9	4.1	3.8	3.7	3.3	7.4	8.6	5.8	5.4
Automobiles.....	6.5	5.6	6.6	4.8	4.9	4.7	4.1	3.3	7.8	10.2	8.6	7.5
Nonferrous metals and their products.....	5.8	5.6	7.5	5.8	4.6	4.2	6.1	5.0	6.7	7.2	7.4	7.9
Lumber and timber basic products.....	10.7	9.1	6.7	6.0	9.8	8.2	6.2	5.4	10.2	11.2	7.1	8.2
Furniture and finished lumber products.....	9.5	8.3	9.5	8.0	8.4	7.2	8.4	7.0	10.9	10.7	9.6	8.9
Stone, clay, and glass products.....	5.4	5.4	5.6	6.1	4.5	4.2	5.0	4.9	6.7	7.7	6.7	8.5
Textile-mill products.....	5.9	5.9	6.3	6.5	4.8	5.1	5.8	5.9	6.4	6.6	6.4	6.4
Apparel and other finished textile products.....	3.9	4.0	7.4	6.6	3.3	3.6	7.0	6.2	4.8	4.5	7.3	6.4
Leather and leather products.....	4.5	4.5	7.7	6.8	4.0	3.6	7.1	6.2	3.9	4.4	6.0	6.5
Food and kindred products.....	11.3	6.5	12.5	9.3	5.0	3.6	7.1	6.7	7.8	13.4	12.2	13.2
Tobacco manufactures.....	6.2	5.5	8.0	6.6	4.4	4.0	6.8	5.7	6.7	7.2	8.2	10.0
Paper and allied products.....	6.2	5.4	8.5	7.6	5.2	4.5	7.9	6.7	6.2	6.4	8.1	8.1
Chemicals and allied products.....	3.3	3.1	5.2	4.6	2.7	2.4	4.2	3.8	4.2	4.7	4.4	5.5
Products of petroleum and coal.....	2.0	1.8	6.0	5.9	1.6	1.2	3.8	3.3	2.2	2.8	3.5	3.1
Rubber products.....	4.5	3.9	6.1	5.5	4.0	3.3	5.5	5.0	5.4	5.5	6.9	6.4
Miscellaneous industries.....	4.1	3.7	5.9	5.3	3.0	2.5	4.5	4.1	4.4	5.3	5.8	6.6

<sup>1</sup> These figures are based on a slightly smaller sample than that for all employees, inasmuch as some firms do not report separate data for women.

<sup>2</sup> Preliminary figures.



# Trends of Earnings and Hours

## Summary of Earnings and Hours Data for August 1946

ACCORDING to preliminary estimates, weekly earnings in manufacturing industries increased to \$45.41 in September 1946, more than \$4 above a year ago. Retail prices of consumers goods rose about 13 percent over the same period.

The rise in weekly earnings, evidenced in both the heavy and light industries, reflects an average increase in hourly earnings of 13½ cents over the year, which more than offset the effect in weekly earnings of a 1¼ hour reduction in the average workweek.

Preliminary averages for September are as follows:

	Weekly earnings	Weekly hours	Hourly earnings (cents)
All manufacturing.....	\$45.41	40.3	112.6
Durable goods.....	48.39	40.3	120.1
Nondurable goods.....	42.34	40.3	104.9

Final figures for August show that 18 of the 20 major manufacturing groups had higher average hourly earnings than in July. Additional wage rate increases were the dominant factor in effecting these gains while the payment of premium rates for a larger number of overtime hours was a contributing factor.

Average hours worked per week in manufacturing increased to 40.4 in August, the durable and nondurable goods groups both averaging the same workweek. This is the first time in 1946 that the average hours worked in the durable goods group has been as long as in the nondurable and is the first time in 4 months that the average for the heavy industries has been over the 40-hour mark. The lengthening of the workweek in the durable goods group indicates that some of the reconversion difficulties and material shortages have been ironed out.

Weekly earnings in all major manufacturing groups averaged over \$34 in August, with only 5 groups averaging less than \$40. Of the 20 major groups, 9 (lumber, furniture, stone, textiles, apparel, food, tobacco, paper, and printing) had weekly earnings which set new high points.

Earnings and Hours in Manufacturing and Nonmanufacturing Industries,  
August 1946

## MANUFACTURING

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946
All manufacturing.....	\$44.90	\$43.34	\$43.31	40.4	39.6	40.0	111.1	109.3	108.4
Durable goods.....	47.84	46.13	46.32	40.4	39.2	39.8	118.4	117.7	116.5
Nondurable goods.....	41.90	40.49	40.28	40.4	40.1	40.2	103.6	101.0	100.3
<i>Durable goods</i>									
Iron and steel and their products.....	48.62	46.78	46.74	39.8	38.5	38.8	122.2	121.6	120.6
Blast furnaces, steel works, and rolling mills.....	49.73	47.85	46.98	37.9	36.4	36.0	130.5	131.4	130.3
Gray-iron and semisteel castings.....	50.95	48.53	50.01	41.8	40.4	41.8	122.0	120.3	119.8
Malleable-iron castings.....	51.38	50.01	48.36	41.0	40.7	39.9	126.3	123.5	121.1
Steel castings.....	49.46	46.35	48.29	38.8	36.7	38.4	126.8	126.3	125.8
Cast-iron pipe and fittings.....	42.39	41.16	41.11	40.9	39.7	39.7	103.4	103.6	103.6
Tin cans and other tinware.....	46.02	43.59	42.43	42.6	40.9	40.2	108.7	106.4	105.4
Wirework.....	49.37	49.61	47.20	41.8	41.9	41.2	118.9	118.3	114.4
Cutlery and edge tools.....	44.98	43.74	45.03	43.1	42.3	43.4	104.3	103.2	103.7
Tools (except edge tools, machine tools, files, and saws).....	46.91	46.16	46.31	42.4	42.5	43.0	110.6	108.7	107.7
Hardware.....	44.88	44.20	43.71	41.7	41.2	41.4	106.9	106.6	105.1
Plumbers' supplies.....	46.00	43.98	44.24	40.2	39.0	39.9	113.8	112.8	110.8
Stoves, oil burners, and heating equipment, not elsewhere classified.....	47.16	44.68	45.56	40.6	39.6	40.3	116.1	112.9	113.1
Steam and hot-water heating apparatus and steam fittings.....	47.81	46.28	46.35	40.3	39.5	39.5	118.6	117.2	117.4
Stamped and enameled ware and galvanizing.....	45.53	43.15	44.19	40.5	38.7	39.8	112.5	111.4	111.0
Fabricated structural and ornamental metalwork.....	48.35	46.38	46.59	40.5	39.3	39.8	119.3	118.5	117.7
Metal doors, sash, frames, molding, and trim.....	52.39	51.74	49.46	44.5	44.8	45.2	119.2	117.2	110.9
Bolts, nuts, washers, and rivets.....	46.55	41.59	44.29	40.4	36.6	39.2	114.3	113.0	112.6
Forgings, iron and steel.....	53.94	48.77	51.16	40.0	37.1	39.1	134.9	131.4	130.8
Screw-machine products and wood screws.....	50.86	48.69	48.74	42.8	41.5	41.8	118.7	117.4	116.7
Steel barrels, kegs, and drums.....	45.06	41.12	42.70	39.1	35.8	38.1	115.5	115.0	112.4
Firearms <sup>2</sup> .....	49.86	51.16	51.91	40.4	41.0	41.2	123.7	124.7	126.1
Electrical machinery.....	47.38	45.43	45.72	40.5	39.4	39.8	116.8	115.4	114.8
Electrical equipment.....	48.17	46.01	46.15	40.2	38.8	39.3	119.7	118.4	117.3
Radio and phonographs.....	41.96	40.62	40.00	39.9	39.3	38.9	105.2	103.4	102.9
Communication equipment.....	49.77	47.72	49.37	42.2	41.0	42.2	118.2	116.4	117.1
Machinery, except electrical.....	50.96	49.76	50.04	40.9	40.4	40.9	124.7	123.2	122.3
Machinery and machine-shop products.....	51.06	49.49	49.70	41.6	40.7	41.2	123.1	121.2	120.2
Engines and turbines.....	51.95	52.77	52.43	39.0	40.3	40.0	132.8	131.2	132.0
Tractors.....	51.01	49.73	50.58	39.1	37.9	39.1	130.3	131.1	129.3
Agricultural machinery, excluding tractors.....	49.20	48.02	47.77	39.9	39.7	39.6	123.8	121.5	121.0
Machine tools.....	54.07	52.44	53.86	42.0	41.3	42.2	129.1	126.9	127.7
Machine-tool accessories.....	54.49	52.09	54.00	40.8	40.0	41.4	134.0	130.5	130.9
Textile machinery.....	48.28	47.42	46.99	41.9	41.4	41.9	115.2	114.4	112.3
Typewriters <sup>2</sup> .....	46.01	46.49	45.08	41.1	41.7	42.3	111.9	111.6	106.5
Cash registers, adding and calculating machines.....	52.84	56.29	56.00	39.9	41.9	42.0	133.8	134.9	133.8
Washing machines, wringers and driers, domestic.....	46.10	44.99	43.81	41.2	40.7	40.2	112.0	110.5	109.0
Sewing machines, domestic and industrial.....	52.27	49.58	50.40	42.1	43.1	43.6	124.8	115.6	116.5
Refrigerators and refrigeration equipment <sup>2</sup> .....	47.40	46.77	46.64	39.0	38.6	38.6	122.0	121.0	120.8
Transportation equipment, except automobiles.....	53.94	53.46	53.32	39.8	39.2	39.5	135.5	136.5	135.0
Locomotives.....	57.48	59.18	58.91	39.8	40.5	40.5	144.5	146.0	145.6
Cars, electric- and steam-railroad.....	50.23	48.24	49.17	41.1	39.4	40.8	122.3	122.2	120.5
Aircraft and parts, excluding aircraft engines.....	53.68	53.03	52.55	41.0	40.0	40.4	131.2	132.4	130.2
Aircraft engines.....	56.26	54.72	55.91	41.7	40.6	41.6	135.7	134.8	134.3
Shipbuilding and boatbuilding.....	54.07	54.36	53.99	38.0	38.1	38.1	143.0	143.5	141.6
Motorcycles, bicycles, and parts.....	49.66	45.70	47.05	40.6	38.8	39.8	122.3	118.0	118.2
Automobiles.....	53.39	51.15	49.32	39.2	37.8	36.6	136.1	135.4	134.7

See footnotes at end of table.

## Earnings and Hours in Manufacturing and Nonmanufacturing Industries, August 1946—Continued

## MANUFACTURING—Continued

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946	Aug. 1946 <sup>1</sup>	July 1946	June 1946
<b>Durable goods—Continued</b>									
Nonferrous metals and their products	\$47.78	\$46.57	\$47.61	40.7	40.1	40.9	Cents 117.3	Cents 116.3	Cents 116.3
Smelting and refining, primary, of nonferrous metals	47.93	47.65	47.45	40.2	40.0	40.1	119.1	119.2	118.2
Alloying and rolling and drawing of nonferrous metals, except aluminum	50.68	50.12	52.53	40.6	40.4	41.7	124.8	123.7	125.8
Clocks and watches	42.63	40.44	40.70	41.0	39.8	40.3	104.0	101.7	101.1
Jewelry (precious metals) and jewelers' findings	46.31	44.29	47.09	42.5	41.6	43.3	109.1	106.7	108.3
Silverware and plated ware	52.78	50.29	51.42	45.2	43.9	44.8	116.8	114.6	114.7
Lighting equipment	45.59	44.44	45.00	39.2	38.2	39.2	116.4	116.3	114.7
Aluminum manufactures	46.52	45.67	46.14	39.7	39.1	39.5	117.2	116.8	116.7
Lumber and timber basic products	38.09	35.09	37.62	41.4	38.6	41.5	91.9	90.9	90.8
Sawmills and logging camps	36.82	33.99	36.56	40.9	38.2	41.1	89.9	89.1	88.8
Planing and plywood mills	42.21	38.71	41.11	43.1	40.0	42.5	97.9	96.5	96.8
Furniture and finished lumber products	40.11	38.35	38.73	42.0	41.0	41.8	95.6	93.6	92.7
Furniture	40.80	38.80	39.31	41.7	40.6	41.4	98.1	95.8	95.0
Caskets and other morticians' goods <sup>2</sup>	40.86	40.30	41.69	42.0	41.4	42.9	97.0	96.4	96.9
Wood preserving	36.84	36.15	35.91	41.4	40.9	41.9	89.4	88.4	85.7
Stone, clay, and glass products	43.26	41.80	42.01	40.7	39.5	40.4	106.3	105.7	104.1
Glass and glassware	43.13	41.87	42.16	39.4	38.0	38.7	109.5	110.2	108.9
Glass products made from purchased glass	39.46	37.33	38.22	41.9	40.4	41.2	91.9	90.2	91.4
Cement	45.68	44.66	43.10	42.2	41.7	41.4	108.3	107.2	104.2
Brick, tile, and terra cotta	40.67	39.44	39.05	40.0	39.8	40.0	101.2	99.1	97.9
Pottery and related products	41.34	38.84	40.69	38.5	36.5	39.5	107.9	106.8	104.0
Gypsum	50.45	46.40	48.02	47.2	44.3	47.2	106.9	104.8	101.6
Lime	45.27	42.11	42.06	46.6	44.9	45.2	96.7	93.2	91.6
Marble, granite, slate, and other products	43.63	42.44	42.51	43.1	41.9	42.3	100.7	100.4	100.0
Abrasives	47.02	47.02	46.78	40.1	39.9	40.3	116.7	117.9	116.1
Asbestos products	50.02	48.70	48.18	43.9	42.9	42.8	114.4	113.6	112.5
<b>Nondurable goods</b>									
Textile-mill products and other fiber manufactures	36.99	34.76	35.02	40.1	39.6	40.0	92.3	87.7	87.5
Cotton manufactures, except smallwares	34.81	31.64	31.75	39.8	39.4	39.5	87.5	80.3	80.3
Cotton smallwares	38.67	37.44	36.41	41.0	41.2	40.8	94.2	90.9	89.3
Silk and rayon goods	37.42	34.94	34.64	41.3	40.7	40.8	90.6	85.8	85.0
Woolen and worsted manufactures, except dyeing and finishing	41.88	41.18	41.63	40.9	40.5	41.1	102.4	101.7	101.4
Hosiery	36.07	33.47	33.89	38.1	37.2	38.1	94.3	89.9	88.9
Knitted cloth	39.29	38.98	39.41	42.2	42.3	43.1	93.1	92.3	90.9
Knitted outerwear and knitted gloves	34.35	33.73	35.31	38.6	38.6	39.6	88.1	87.0	87.9
Knitted underwear	31.63	31.00	30.60	38.1	38.1	38.4	83.0	81.0	79.2
Dyeing and finishing textiles, including woolen and worsted	40.92	39.66	40.64	42.1	41.9	42.9	97.1	94.5	94.8
Carpets and rugs, wool	42.10	41.03	41.64	40.4	40.0	40.8	104.3	102.7	102.4
Hats, fur-felt	52.93	48.43	49.57	39.8	39.3	40.8	135.4	123.6	121.4
Jute goods, except felts	38.23	36.39	36.47	43.4	42.2	43.9	89.7	87.8	84.4
Cordage and twine	37.17	34.43	34.68	41.3	40.2	40.8	90.1	85.6	84.8
Apparel and other finished textile products	36.53	33.94	35.23	37.0	36.0	37.1	98.6	94.2	95.1
Men's clothing, not elsewhere classified	38.11	36.19	38.18	37.5	36.3	38.1	101.3	99.2	99.9
Shirts, collars, and nightwear	28.71	27.90	28.73	36.9	36.1	37.1	78.1	76.9	77.0
Underwear and neckwear, men's	31.23	29.83	30.56	37.2	36.4	36.4	84.0	82.0	83.9
Work shirts	23.25	22.11	22.62	35.4	34.1	35.2	65.7	64.8	64.2
Women's clothing, not elsewhere classified <sup>3</sup>	47.70	42.67	44.02	36.6	35.4	36.1	126.0	118.0	119.1
Corsets and allied garments	34.37	33.29	34.42	38.2	38.2	38.7	89.4	87.4	89.2
Millinery	43.71	42.47	37.69	32.9	32.2	30.4	110.0	108.4	102.8
Handkerchiefs	28.39	26.43	27.26	36.2	34.7	36.0	78.6	76.4	75.8
Curtains, draperies, and bedspreads	27.23	27.37	28.45	35.5	36.2	37.3	77.7	76.5	76.6
Housefurnishings other than curtains, etc.	35.49	34.12	31.94	38.8	38.2	36.5	91.8	88.9	86.8
Textile bags	31.53	30.06	32.03	38.7	38.0	39.5	81.5	79.0	81.0

See footnotes at end of table.



## Earnings and Hours in Manufacturing and Nonmanufacturing Industries, August 1946—Continued

## MANUFACTURING—Continued

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946
<i>Nondurable goods—Continued</i>									
Leather and leather products.....	\$36.71	\$36.48	\$37.34	37.8	38.2	39.3	Cents 97.1	Cents 95.4	Cents 95.0
Leather.....	44.54	44.07	44.51	40.3	40.1	40.6	111.4	110.2	109.3
Boot and shoe cut stock and findings.....	37.36	35.59	36.24	40.0	39.7	40.3	93.6	90.1	90.5
Boots and shoes.....	35.17	35.38	36.14	36.9	37.8	39.0	94.5	92.7	92.3
Leather gloves and mittens.....	32.50	32.31	32.26	36.7	36.4	36.5	89.0	88.9	88.6
Trunks and suitcases.....	39.27	37.10	39.04	39.9	37.8	39.7	98.2	98.2	97.5
Food.....	44.35	43.21	41.09	43.7	43.8	42.3	101.5	98.6	97.2
Slaughtering and meat packing.....	48.37	48.05	43.05	43.4	43.0	39.3	111.6	111.5	109.5
Butter.....	40.73	40.71	39.65	46.3	47.4	47.0	88.0	85.6	83.1
Condensed and evaporated milk.....	43.55	43.48	44.19	48.0	48.8	49.9	90.8	89.1	88.5
Ice cream.....	45.63	45.67	44.06	47.6	48.3	47.4	93.2	92.3	90.6
Flour.....	51.06	48.83	44.33	49.7	48.9	46.6	103.0	99.8	95.2
Cereal preparations.....	46.04	43.85	45.52	42.4	41.5	42.8	108.9	105.8	106.4
Baking.....	44.63	43.81	41.42	45.0	44.8	43.9	99.4	98.0	94.5
Sugar refining, cane.....	39.27	39.97	38.59	39.1	39.3	39.4	100.4	101.8	97.9
Sugar, beet.....	40.92	40.67	38.39	38.3	37.3	37.4	106.8	109.1	102.5
Confectionery.....	34.83	33.57	34.85	39.6	38.4	39.5	85.9	85.2	86.0
Beverages, nonalcoholic.....	40.32	40.52	38.73	44.2	44.7	43.6	90.7	90.2	88.3
Malt liquors.....	56.44	54.21	52.27	42.5	42.0	41.3	132.1	129.1	126.6
Canning and preserving.....	41.12	38.89	35.78	42.3	43.2	40.0	97.6	90.4	89.8
Tobacco manufactures.....	34.34	33.24	33.83	38.7	39.1	40.0	88.7	85.1	84.6
Cigarettes.....	38.21	36.66	37.78	39.1	40.1	41.4	97.8	91.5	91.2
Cigars.....	31.66	31.05	31.25	38.6	38.6	39.2	81.8	80.3	79.6
Tobacco (chewing and smoking) and snuff.....	31.28	29.45	29.86	37.4	37.1	37.8	83.7	79.4	79.0
Paper and allied products.....	44.20	43.11	42.74	43.4	42.8	43.0	101.9	100.6	99.3
Paper and pulp.....	47.49	46.02	45.34	44.3	43.8	43.7	107.1	105.2	103.8
Envelopes.....	42.10	41.03	41.82	43.1	42.6	43.1	96.9	95.7	96.9
Paper bags.....	36.84	37.11	36.54	40.9	41.4	40.9	91.0	91.0	89.7
Paper boxes.....	41.07	39.95	39.94	42.6	41.9	42.4	96.6	95.4	94.4
Printing, publishing, and allied industries.....	53.04	51.81	51.73	40.8	40.2	40.5	129.9	128.8	127.8
Newspapers and periodicals.....	58.10	56.72	56.08	38.7	37.9	37.9	147.6	146.1	144.9
Printing, book and job.....	50.93	50.03	49.82	41.9	41.5	41.6	122.0	121.2	120.3
Lithographing.....	54.10	51.80	53.03	43.3	41.8	43.4	124.8	124.1	122.1
Chemicals and allied products.....	44.96	44.67	43.95	40.8	40.7	40.5	110.2	109.8	108.4
Paints, varnishes, and colors.....	47.41	46.62	47.10	42.6	42.2	42.9	111.4	110.9	109.9
Drugs, medicines, and insecticides.....	38.95	38.42	38.26	40.0	39.7	40.2	97.7	97.0	95.3
Soap.....	47.21	47.08	47.60	40.7	41.0	40.9	115.9	114.8	116.4
Rayon and allied products.....	42.62	41.08	40.09	39.1	38.6	38.3	108.9	106.5	104.7
Chemicals, not elsewhere classified.....	51.81	52.09	50.69	41.1	41.5	40.8	126.0	125.6	124.3
Explosives and safety fuses.....	48.37	47.96	48.53	39.1	38.9	39.1	123.7	123.3	123.2
Ammunition, small-arms.....	39.53	42.65	42.10	38.7	38.6	37.7	102.3	110.6	111.5
Cottonseed oil.....	30.97	29.65	29.42	47.2	47.0	46.0	65.4	63.1	64.0
Fertilizers.....	35.09	34.11	32.58	42.1	42.7	41.7	83.4	79.8	78.1
Products of petroleum and coal.....	54.30	54.19	53.34	40.3	40.0	39.6	134.6	135.5	134.7
Petroleum refining.....	57.10	57.02	56.46	40.0	39.7	39.5	142.7	143.7	143.1
Coke and byproducts.....	46.45	46.65	43.65	39.4	38.9	37.5	117.6	119.5	116.1
Roofing materials.....	49.59	48.06	48.42	44.7	44.5	44.8	110.9	108.0	108.1
Rubber products.....	50.99	50.60	50.45	39.4	39.2	39.3	129.5	129.2	128.3
Rubber tires and inner tubes.....	55.43	56.11	54.82	37.3	38.0	37.4	147.7	147.2	146.1
Rubber boots and shoes.....	44.45	42.98	44.98	41.2	39.6	41.8	107.8	108.5	107.6
Rubber goods, other.....	46.91	44.93	45.44	41.7	40.8	41.7	111.8	110.2	109.1
Miscellaneous industries.....	43.32	42.39	42.93	41.0	40.5	41.2	105.8	104.8	104.2
Instruments (professional and scientific) and fire-control equipment.....	49.61	49.06	49.57	40.1	39.9	40.6	123.7	123.4	121.1
Pianos, organs, and parts.....	46.11	44.04	45.77	41.3	40.6	42.0	112.1	108.6	109.1

<sup>1</sup> See footnotes at end of table.

# Earnings and Hours in Manufacturing and Nonmanufacturing Industries, August 1946—Continued

## NONMANUFACTURING

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946	Aug. 1946	July 1946	June 1946
<b>Mining:</b>							<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Anthracite.....	\$60.65	\$49.53	\$59.58	37.9	31.7	38.2	159.8	156.2	155.9
Bituminous coal.....	62.37	52.27	64.44	42.4	36.0	43.4	146.7	145.7	147.4
Metal.....	49.93	47.70	48.13	41.2	39.6	40.8	121.2	120.5	118.0
Iron.....	47.96	47.96	47.41	40.2	40.1	39.8	119.3	119.8	119.2
Copper.....	52.13	50.47	48.96	42.4	41.2	41.6	123.1	122.5	117.8
Lead and zinc.....	50.98	43.60	48.13	41.5	36.2	40.9	122.7	120.4	117.8
Quarrying and nonmetallic.....	47.04	45.51	45.32	46.5	45.4	45.7	101.5	100.4	99.4
Crude petroleum production.....	53.35	52.97	52.23	40.9	40.4	39.5	130.4	131.1	132.2
<b>Public utilities:</b>									
Telephone.....	44.19	44.82	44.93	39.3	39.7	39.3	112.9	113.5	114.7
Telegraph.....	41.31	41.15	40.39	45.4	45.2	44.5	91.0	91.0	90.8
Electric light and power.....	52.27	51.96	52.07	41.6	41.5	40.9	126.0	125.8	127.5
Street railways and busses <sup>2</sup> .....	55.35	54.60	52.46	48.6	48.4	49.3	109.9	109.7	105.3
<b>Trade:</b>									
Wholesale.....	48.14	48.06	47.88	41.7	41.4	41.4	114.8	115.5	114.6
Retail.....	33.17	32.94	32.89	41.5	41.2	40.9	89.1	88.9	87.6
Food.....	40.91	40.46	39.41	42.7	42.3	41.8	92.4	92.1	90.3
General merchandise.....	28.63	28.22	27.80	37.6	37.5	36.9	74.7	74.2	73.4
Apparel.....	34.93	34.27	34.10	37.5	37.4	37.3	92.7	92.5	92.1
Furniture and housefurnishings.....	44.52	44.86	43.98	44.6	44.0	43.6	101.2	105.1	103.6
Automotive.....	47.97	47.36	47.47	46.1	46.1	46.3	105.8	105.2	104.0
Lumber and building materials.....	42.93	42.32	42.08	43.0	42.7	43.2	101.3	100.1	98.8
Hotels (year-round) <sup>3</sup> .....	27.15	26.63	26.70	43.8	44.0	43.9	61.4	60.2	59.8
Power laundries.....	30.14	30.37	30.64	43.0	43.4	43.3	69.3	69.8	70.3
Cleaning and dyeing.....	35.01	35.58	36.29	42.6	43.2	43.8	83.2	82.6	83.4
Brokerage.....	62.61	64.04	67.39	(*)	(*)	(*)	(*)	(*)	(*)
Insurance.....	49.87	50.76	51.51	(*)	(*)	(*)	(*)	(*)	(*)

<sup>1</sup> These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked during any part of one pay period ending nearest the 15th of the month. As not all reporting firms furnish man-hour data, average hours and average hourly earnings for individual industries are based on a slightly smaller sample than are weekly earnings. For manufacturing, mining, power laundries, and cleaning and dyeing industries, the data relate to production workers only. For the remaining industries the data relate to all employees except high-paid executives and officials. Data for the current and immediately preceding months are subject to revision.

<sup>2</sup> New series beginning May 1946; not comparable with previously published data:

*Firearms.*—New May data are 41.0 hours and 122.7 cents. Comparable April data are 41.1 hours and 121.1 cents.

*Typewriters.*—New May data are 42.8 hours and 105.8 cents. Comparable April data are 43.1 hours and 105.4 cents.

<sup>3</sup> Revisions have been made as follows in the data for earlier months:

*Refrigerators and refrigeration equipment.*—January through April 1946 to \$34.62, \$38.74, \$46.16, and \$46.98; 106.4, 111.7, 117.3, and 118.4 cents. Data for January and subsequent months are now comparable with December 1945 and earlier months.

*Caskets and other morticians' goods.*—October, November, and December 1945 to \$37.94, \$36.41, and \$38.71; October and November to 42.9 and 41.4 hours; 88.5 and 87.8 cents.

*Women's clothing, not elsewhere classified.*—May 1946 to \$45.10.

*Street railways and busses.*—March and April 1945 to \$49.63 and \$49.69; 95.6 and 96.8 cents.

<sup>4</sup> Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.

<sup>5</sup> Cash payments only; additional value of board, room, and tips not included.

<sup>6</sup> Not available.

## Trend of Factory Earnings, 1939 to August 1946

THE published average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to August 1946.<sup>1</sup> The earnings shown in this table are on a gross basis (i. e., before deductions for social security, income taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged \$44.90 in August 1946—93.6 percent above the average in January 1939, 68.5 percent above January 1941, and 15.5 percent above October 1942. Weekly earnings for August 1946 increased 7.6 percent above August 1945, however, the average weekly earnings are still below the wartime peak of \$47.50 in January 1945, as the result of shorter working hours and shifts of workers from the high paid war industries to the lower paid consumer goods industries.

Gross hourly earnings in all manufacturing averaged 111.1 cents in August 1946—75.8 percent above the average in January 1939, 62.7 percent above January 1941, and 24.4 percent above October 1942.

Straight-time average hourly earnings, as shown in columns 7 to 9, are weighted by man-hours of employment in the major divisions of manufacturing for January 1941. These earnings are estimated to exclude premium pay at time and a half for work in excess of 40 hours. However, the effect of extra pay for work on supplementary shifts and on holidays is included. For all manufacturing, the straight-time average in August 1946 was 107.8 cents per hour; this was 68.2 percent above January 1939, 62.3 percent above January 1941, and 33.6 percent above October 1942.

<sup>1</sup> Compare Trends in Factory Wages, 1939-43, in Monthly Labor Review, November 1943 (p. 869), especially table 4 (p. 879). For detailed data regarding weekly earnings, see preceding table.

	1939: Jan	1940: Jan	1941: Jan	1942: Jan	1943: Jan	1944: Jan	1945: Jan	1946: Jan	1946: Aug
Weekly earnings in all manufacturing	\$32.50	\$35.00	\$39.00	\$38.50	\$42.00	\$44.00	\$46.00	\$47.50	\$44.90
Percent above 1939: Jan	0	7.7	20.0	17.2	32.3	35.4	43.1	46.2	93.6
Percent above 1941: Jan	-20.0	-12.3	0	-1.0	6.4	8.5	14.1	15.9	68.5
Percent above 1942: Jan	-17.2	-18.2	0	0	6.5	8.6	14.3	15.6	15.5
Percent above 1945: Jan	-43.1	-45.5	-41.3	-42.6	0	2.3	0	0	7.6
Percent above 1946: Jan	-46.2	-48.6	-44.4	-45.7	-41.5	-39.1	0	0	0
Gross hourly earnings in all manufacturing	95.0	100.0	107.0	106.0	115.0	118.0	122.0	125.0	111.1
Percent above 1939: Jan	0	5.3	12.6	10.5	21.1	24.2	27.3	29.5	75.8
Percent above 1941: Jan	-12.6	-20.0	0	-1.9	8.4	11.5	14.6	16.8	62.7
Percent above 1942: Jan	-10.5	-12.6	0	0	8.5	11.6	14.7	16.9	24.4
Percent above 1945: Jan	-27.3	-29.5	-25.4	-26.7	0	2.3	0	0	0
Percent above 1946: Jan	-29.5	-31.7	-27.5	-28.8	-24.8	-22.4	0	0	0
Straight-time average hourly earnings	95.0	100.0	107.0	106.0	115.0	118.0	122.0	125.0	107.8
Percent above 1939: Jan	0	5.3	12.6	10.5	21.1	24.2	27.3	29.5	68.2
Percent above 1941: Jan	-12.6	-20.0	0	-1.9	8.4	11.5	14.6	16.8	62.3
Percent above 1942: Jan	-10.5	-12.6	0	0	8.5	11.6	14.7	16.9	33.6
Percent above 1945: Jan	-27.3	-29.5	-25.4	-26.7	0	2.3	0	0	0
Percent above 1946: Jan	-29.5	-31.7	-27.5	-28.8	-24.8	-22.4	0	0	0



## Earnings of Factory Workers in Selected Months, 1939 to August 1946

Month and year	Average weekly earnings			Average hourly earnings			Estimated straight-time average hourly earnings <sup>1</sup> weighted by January 1941 employment		
	All manu- factur- ing	Dura- ble goods	Non- dura- ble goods	All manu- factur- ing	Dura- ble goods	Non- dura- ble goods	All manu- factur- ing	Dura- ble goods	Non- dura- ble goods
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1939: January.....	\$23.19	\$25.33	\$21.57	\$0.632	\$0.696	\$0.583	\$0.641	\$0.702	\$0.575
1940: January.....	24.56	27.39	22.01	.655	.717	.598	.652	.708	.589
1941: January.....	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601
1942: January.....	33.40	38.98	26.97	.801	.890	.688	.751	.826	.668
July.....	36.43	42.51	28.94	.856	.949	.725	.783	.863	.696
October.....	38.89	45.31	30.66	.893	.990	.751	.807	.888	.718
1943: January.....	40.62	46.68	32.10	.919	1.017	.768	.819	.905	.726
April.....	42.48	48.67	33.58	.944	1.040	.790	.833	.916	.742
July.....	42.76	48.76	34.01	.963	1.060	.806	.850	.939	.753
October.....	44.86	51.26	35.18	.988	1.086	.824	.863	.950	.768
December.....	44.58	50.50	35.61	.995	1.093	.832	.873	.962	.794
1944: January.....	45.29	51.21	36.03	1.002	1.099	.838	.877	.965	.780
April.....	45.55	51.67	36.16	1.013	1.110	.850	.889	.976	.795
July.....	45.43	51.07	37.05	1.018	1.116	.862	.901	.993	.802
October.....	46.94	53.18	37.97	1.031	1.129	.878	.908	.991	.817
December.....	47.44	53.68	38.39	1.040	1.140	.883	.912	.997	.820
1945: January.....	47.50	53.54	38.66	1.046	1.144	.891	.920	1.005	.827
April.....	47.12	52.90	38.80	1.044	1.138	.899	.925	1.007	.836
July.....	45.12	50.60	38.59	1.032	1.126	.902	.933	1.017	.842
October.....	40.97	44.23	37.76	.985	1.063	.909	.942	1.014	.863
December.....	41.21	44.08	38.52	.994	1.066	.927	.957	1.028	.880
1946: January.....	41.15	43.67	38.75	1.004	1.070	.941	.970	1.037	.895
April.....	42.88	45.71	40.13	1.058	1.131	.988	1.027	1.102	.946
June.....	43.31	46.32	40.28	1.084	1.165	1.003	1.057	1.142	.964
July <sup>2</sup> .....	43.34	46.13	40.49	1.093	1.177	1.010	1.067	1.154	.971
August <sup>2</sup> .....	44.90	47.84	41.90	1.111	1.184	1.036	1.078	1.154	.994

<sup>1</sup> The method of estimating straight-time average hourly earnings makes no allowance for special rates of pay for work done on major holidays. Estimates for the months of January, July, September, and November, therefore, may not be precisely comparable with those for the other months, in which important holidays are seldom included in the pay periods for which manufacturing establishments report to the Bureau. This characteristic of the data does not appear to invalidate the comparability of the figures for January 1941 with those for the following months.

<sup>2</sup> Preliminary.

# Labor Chronology

## Chronology of Labor Events, July–September 1946

### JULY

1946

July 3. The President approved an amendment to the Act (approved on June 18, 1934) to Protect Trade and Commerce Against Interference by Violence, Threats, Coercion, or Intimidation. The amending law, called the "Hobbs Antiracketeering Act," provides imprisonment for not more than 20 years or a fine of not more than \$10,000, or both, upon conviction, for anyone who "in any way or degree obstructs, delays, or affects commerce, or the movement of any article or commodity in commerce, by robbery or extortion." The penalties are also applicable to anyone who conspires, who attempts, or participates in such action. (Source: Public Law 486, 79th Cong., 2d. sess.)

July 3. The nearly 600 members of the International Association of Machinists employed by the Northwest Airlines, Inc., went on strike for higher wages and other issues. (Source: Labor, July 13, 1946, and BLS records.) The President, by Executive Order No. 9748, provided for establishment of an emergency board to investigate the dispute. (Source: Federal Register, Vol. 11, p. 7518.)

On July 4, the strike ended. (Source: BLS records.)

On August 7, the emergency board stated that it did "not recommend any increase in the wage rate." Although the union demanded an average wage increase of about 18 percent, the board expressed the opinion that "the wage scale on this line on an over-all basis exceeds that in effect on all the other major airlines." (Source: White House report of Aug. 7, 1946, pp. 12, 13.)

On September 6, the company and the union reached a compromise agreement, whereby the union's wage demands were met in part. (Source: Agreement between Northwest Airlines, Inc., and International Association of Machinists, Sept. 6, 1946.)

July 16. The President's Reorganization Plan No. 2, whereby the Children's Bureau was transferred to the Federal Security Agency, became effective. The Industrial Division of the Children's Bureau remained in the United States Department of Labor. It was made a part of the Division of Labor Standards, and will be known as the Child Labor and Youth Employment Branch. (Source: U. S. Dept. of Labor releases of July 16, 1946.)

1946

July 16. The President's Reorganization Plan No. 3 became effective. Under this plan, the function of the National Labor Relations Board with respect to the taking of secret ballots of employees on the question of strikes which would interrupt war production was abolished. (Source: Federal Register, Vol. 11, pp. 7875 and 7877.)

July 17. The Federal Coal Mines Administrator (see Chron. item for May 29, 1946, MLR, Aug. 1946) and the United Mine Workers of America (AFL) signed the first collective agreement covering supervisory mine employees (foremen). The agreement applies to the United Clerical, Technical, and Supervisory Workers, District 50, UMWA, at four mines of the Jones and Laughlin Steel Corp. A special clause of the agreement provides for institution of proceedings to bring about a court test of the appropriateness of the unit of supervisory employees. (Source: Labor Relations Reporter, July 22, 1946, 18 LRR, pp. 223, 224.)

On September 11, the Coal Mines Administrator called a conference of the joint wage-scale committee of the bituminous-coal operators and the UMWA for the purpose of finding a basis for the negotiation of a collective agreement for the industry which would relieve the Federal Government of the responsibility of operating the mines. (Source: United Mine Workers Journal, Sept. 15, 1946, p. 3.)

July 19. The Congress for Industrial Organizations Executive Board called upon the President of the United States to convene a conference immediately, consisting of representatives of American labor and industry, for the purpose of giving "the demand and need for immediate wage increases \* \* \* full and official recognition" and to meet "the crisis created by the drive to cripple and destroy price control." (Source: Congress of Industrial Organizations release of July 18-19, 1946.)

On September 21, the President announced that he had asked the Advisory Board of the Office of War Mobilization and Reconversion "to add to its agenda a study of the wage stabilization program." He stated that "the Advisory Board will, of course, consult in detail with the Wage Stabilization Board on this new topic as it has been doing from time to time in the past." (Source: White House release of Sept. 21, 1946.)

July 24. The members of Local 18, United Gas, Coke and Chemical Workers of America (CIO), representing about 600 of the 1,100 employees of the Milwaukee Gas Light Co., began a partial strike. A small force was kept at work to perform essential functions.

On July 25, the strike became complete. It continued until July 27, when work was resumed after the union approved an agreement.

On August 5, representatives of the union and the company held a meeting to discuss issues remaining in dispute. Agreement was not reached and the Secretary of Labor was asked to form a fact-finding board. (Source: U. S. Dept. of Labor report of Sept. 14, 1946.)



1946

**July 24.** On August 7, the Secretary of Labor provided for the creation of a fact-finding board to investigate the labor dispute. (Source: U. S. Dept. of Labor Release S47-148.)

On August 12, a contract in settlement of the disputed issues was signed, to which an amendment was made on August 27, whereby a 15-day vacation was provided for any employee with 20 or more years of seniority in the company and a 10-day vacation for all others having been employed at least 1 year, and specific wage increases were granted. These provisions were retroactive to June 1, 1946. The fact-finding board was requested by the parties to summarize data being collected by the Bureau of Labor Statistics for possible use at a later date. (Source: U. S. Dept. of Labor report of Sept. 14, 1946.)

**July 25.** The President approved a joint resolution amending the Emergency Price Control Act of 1942, as amended, and the Stabilization Act of 1942, as amended. By this measure price control, which had lapsed on June 30, 1946 (see Chron. item for June 30, 1946, MLR, Aug. 1946) was reestablished to be effective until June 30, 1947. All rent ceilings in effect on June 30 were among the controls restored. Exceptions were authorized from price ceilings until August 20, 1946, for certain commodities including meat, poultry, eggs, and dairy products. Provision was made for the establishment of a Price Decontrol Board having the power to order price controls removed from any commodity after considering petition for review of the action of the Price Administrator or the Secretary of Agriculture, and to restore ceilings on exempted items after August 20, if warranted. (Source: Public Law 548, 79th Cong., 2d sess.)

**July 25.** The President, by Executive Order No. 9762, transferred to the Office of War Mobilization and Reconversion the Office of Economic Stabilization, which was reestablished by Executive Order No. 9699 of February 21, 1946 (see Chron. item for Feb. 21, 1946, MLR, May 1946). (Source: Federal Register, Vol. 11, p. 8073.)

**July 26.** The President approved an act making appropriations for the Department of Labor, the Federal Security Agency, and related independent agencies, for the fiscal year ending June 30, 1947. No part of any appropriation contained in the act may be used to pay any person who either engages in a strike or is a member of an organization that asserts the right to strike against the Federal Government or advocates or is a member of an organization that advocates the overthrow of the Government of the United States by force or violence. The Secretary of Labor is required to transfer to the States on November 15, 1946, the public employment offices, operation of which was transferred to the Federal Government in 1942 to promote the war effort. A provision in the appropriation for the National Labor Relations Board stipulates that no part of the funds "shall be available to organize or to assist in organizing agricultural laborers or used in connection with investigations, hearings, directives, or orders concerning bargaining units composed of agricultural laborers \* \* \*." (Source: Public Law 549, 79th Cong., 2d sess.)

1946  
July 31.

Aug. 2.

Aug. 6.

Aug. 8.

1946

July 31. The President approved an act to amend the Railroad Retirement Acts, the Railroad Unemployment Insurance Act, and the Internal Revenue Code, thereby liberalizing social-security benefits payable to railroad employees. Benefits were extended to cover unemployment caused by sickness or injury, and to include pregnancy and maternity. (Source: Public Law 572, 79th Cong., 2d sess.)

On August 10, the President approved an act to amend the Social Security Act and the Internal Revenue Code, whereby the payroll tax for social security will remain at 1 percent through the calendar year 1947, and will rise to 2½ percent with respect to wages paid in the calendar year 1948. (Source: Public Law 719, 79th Cong., 2d sess.)

## AUGUST

Aug. 2. The Senate confirmed the nominations of Ewan Clague to be Commissioner of Labor Statistics and of Keen Johnson to be Under Secretary of Labor in the United States Department of Labor (see Chron. item for Apr. 17, 1946, MLR, Aug. 1946). (Source: Congressional Record, Vol. 92, p. 10, 883.)

Aug. 6. The Administrator of the Retraining and Reemployment Administration announced appointment of the Interagency Committee on Federal Employment, "to study and evaluate the employment programs of the Federal departments and independent agencies and to submit recommendations to him for coordination of the employment" of veterans and others in Federal Government service. (Source: U. S. Retraining and Reemployment Administration release 701 of Aug. 6, 1946.)

On September 20, the Attorney General announced the validity of the regulations of the Civil Service Commission whereby a World War II veteran has the highest retention preference (A-1 plus) during the first year of reemployment by the Federal Government. The Attorney General declared that such a provision is necessary to carry out the intent of the Selective Training and Service Act of 1940. If, by reason of this preference, another veteran is released who has greater length of service, the supplanted veteran will be given the benefits of the Veterans' Preference Act of 1944 (for discussion, see MLR, Apr. 1946, p. 590) in obtaining a new Government position. (Source: U. S. Department of Justice release of Sept. 20, 1946.)

Aug. 8. The President approved an act affecting the veterans' training program under the Servicemen's Readjustment Act (GI Bill of Rights), as amended (see Chron. item for June 22, 1944, MLR, Sept. 1944; for summaries see MLR, Aug. 1944, p. 383 and Apr. 1946, p. 595), whereby appropriate job-training standards are established and the maximum amount of the monthly allowance plus compensation is fixed at \$175 a month for a veteran without dependents and \$200 for a veteran with dependents. (Source: Public Law 679, 79th Cong., 2d sess.)

On August 27, the Veterans' Administration issued Instruction 8, stating that "incidental overtime earned by a trainee will not be counted against his legal ceiling on subsistence allowance plus training wage." (Source: U. S. Law Week, Sept. 10, 1946, Vol. 15, Sec. 2, p. 2137.)

1946

Aug. 9. The President approved the Armed Forces Leave Act of 1946, under which payments are to be made in lieu of terminal leave to discharged members of the armed services. Such payments are to be made in large part in bonds of the United States which are to mature 5 years after the date of issue. (Source: Public Law 704, 79th Cong., 2d sess.) On July 24, when the President requested an appropriation to provide for this expenditure, it was indicated that the average payment would approximate \$165. (Source: White House release of July 24, 1946.)

Aug. 9. The Director of the OES notified the NWSB that wage increases (affecting more than 45,000 lumber workers) in excess of the recognized postwar "pattern" for the West Coast lumber industry, cannot be used as a basis for price relief under the policies established by Executive Order No. 9697 of February 14, 1946 (see Chron. item for Feb. 14, 1946, MLR, May 1946). This case was the first to be acted upon at the request of a major national industry, and involves, in effect, a "second round" of reconversion wage adjustments. The general "pattern" of increase over VJ-day rates for the industry is 15 cents an hour (see Chron. item for Mar. 28, 1946, MLR, May 1946). (Source: NWSB-82.)

Aug. 15. The members of the National Maritime Union (CIO) employed on the Great Lakes went on strike for shorter hours and higher wages. By August 22, the union reported that 5,000 seamen were idle. (Source: CIO News, Aug. 19, 1946, and BLS records; for discussion, see MLR, Sept. 1946, p. 400.)

On August 30, a settlement was reached with the majority of the ship operators, whereby a "pattern" formula was adopted ending the previous 56-hour workweek for seamen on Great Lakes carriers and establishing a 48-hour week at sea and a 44-hour week in port. (Source: CIO News, Sept. 9, 1946, and BLS records.)

Aug. 21. The Director of the United States Conciliation Service announced the appointment of two new members to the National Labor-Management Advisory Committee, which was established in 1945 by the Secretary of Labor, on the unanimous recommendation of the President's National Labor-Management Conference. Membership consists of eight persons, of whom two each are nominated by the National Association of Manufacturers, the Chamber of Commerce, the American Federation of Labor, and the Congress of Industrial Organizations, respectively. The new members are Louis Ruthenburg, president of Servel, Inc., Evansville, Ind., and Richard T. Leonard, vice president, United Automobile Workers of America, Detroit, Mich. (Source: U. S. Conciliation Service release of Aug. 21, 1946.)

On September 6, the Director of the United States Conciliation Service announced completion of seven regional labor-management advisory committees to work with the Service's seven regional directors. The apportionment of membership in the regional labor-management committees is the same as that in the national body mentioned above. (Source: U. S. Conciliation Service release of Sept. 6, 1946.)



1946

Aug. 22. The President, by Executive Order No. 9770, created an emergency board to investigate a dispute between the Long Island Railroad Co. and certain of its employees represented by the Railroad Workers Industrial Union (division of District 50, United Mine Workers of America, AFL). (Source: Federal Register, Vol. 11, p. 9229.) The approximately 900 train-service employees postponed their strike to give the fact-finding board 30 days in which to report.

On September 20, the President extended by 30 days the time allowed the fact-finding board to report.

On September 24, the fact-finding board persuaded the company and the union to resume negotiations, and the union postponed the date of the strike to October 22. (Source: Railway Age, Sept. 28, 1946, p. 522.)

Aug. 24. The NWSB announced refusal to approve, as a basis for increasing Government costs (see Chron. item for Feb. 14, 1946, MLR, May 1946), requested increases of \$5 and \$10 in excess of \$17.50 for certain classes of watch-keeping personnel in the maritime service, including the key classification of able-bodied seamen. The decision involved the Pacific American Shipowners Association and the Sailors' Union of the Pacific (AFL); the East and Gulf Atlantic Coast General Agents of the War Shipping Administration and the Seafarers' International Union (AFL); and the Pacific American Shipowners Association and the Pacific Coast Marine Firemen, Oilers, Watertenders and Wipers Association (independent). The labor members of the NWSB dissented, stating that the decision deprives workers and employers "of the right to bargain collectively under the National Labor Relations Act." (Source: NWSB-90.) The Committee for Maritime Unity (composed of six CIO and one independent union) had negotiated a \$17.50 monthly increase on June 14, 1946. A wage pattern was established and a strike of about 200,000 workers was avoided (see Chron. item for June 14, 1946, MLR, Aug. 1946).

On September 5, in protest against the NWSB action, a seamen's strike began, which spread rapidly to all ports. (Source: MLR, Oct. 1946, p. 591.)

On September 11, the NWSB issued a statement reaffirming its original action with respect to the wage increases agreed upon by ship operators and seamen in the East and West Coast shipping industry. (Source: NWSB-90 (a).)

On September 12, the Director of Economic Stabilization amended the wage-stabilization regulations to permit governmental agencies to pay wages and salaries comparable to those being paid for the same or comparable services by other operators in the same industry. (Source: Office of Economic Stabilization release of Sept. 12, 1946.)

On September 13, those workers whose agreement with the employers was recognized by reason of the change in the wage stabilization regulations started to return to work. The National Maritime Union (CIO) went on strike to secure parity in wages.

1946

Aug. 24.

On September 19, the arbitrator who had been considering certain issues connected with the June 14, 1946, agreement affecting the NMU (see Chron. item for June 14, 1946, MLR, Aug. 1946) issued his award for the Atlantic and Gulf Coasts providing increases based on the principle of "equal pay for equal work."

On September 21, the Maritime Commission issued an order which provided for parity in wage rates on all Government-owned vessels, and all workers returned to their jobs. (Source: MLR Oct. 1946, p. 592.)

Aug. 24. The Secretary of Labor enlarged to eight members the Federal Committee on Apprenticeship. This national labor-management policy-making body on apprentice training was appointed in 1934, first consisting of Government officials only; in 1937 membership was increased to include representatives of labor and employers. (Source: U. S. Dept. of Labor release of Aug. 24, 1946; for background see MLR Oct. 1934, p. 872; MLR Jan. 1938, p. 100.)

Aug. 26. The Permanent Migration Committee of the International Labor Organization convened in its first session. In all, 25 Governments were represented, and, in addition, 3 sent observers. The committee noted in resolutions that several countries reported that they had nationals who wished to emigrate and several "immigration countries" had expressed readiness "to receive a considerable number of immigrants, both industrial and agricultural, as soon as satisfactory arrangements can be made." In another resolution, the committee reaffirmed its conviction that the principle of nondiscrimination in regard to race is one of the fundamental conditions of progressive and orderly migration movements. (Source: ILO release PMC/1/12.)

On September 16, Edward J. Phelan was appointed by the Governing Body of the ILO as Director of the International Labor Office. Following the resignation of John G. Winant from the directorship in 1941, Mr. Phelan had been acting director. (Source: ILO press release 243 of Sept. 16, 1946.)

On September 19, the twenty-ninth session of the International Labor Conference opened in Montreal, Canada. (Source: Business Action of Sept. 30, 1946.) A resolution was adopted concerning minimum standards of social policy applicable to indigenous populations in dependent territories and three conventions and two recommendations dealt with the employment of children and adolescents. (Source: United Nations Weekly of Oct. 21, 1946, p. 1.)

Aug. 29. The Administrator of the RRA (see Chron. items for Feb. 13, 1946, MLR, May 1946, and for May 8, 1946, MLR, Aug. 1946) established the Federal Interagency Committee on the Coordination of Statistical Services Relating to Retraining and Reemployment. The objective is improved coordination of statistical services relating to retraining, reemployment, vocational education, and vocational rehabilitation. (Source: Federal Register, Vol. 11, p. 9699.)

1946

Sept. 6.

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## SEPTEMBER

1946

- Sept. 6. Local 441 of the United Electrical Radio and Machine Workers of America (CIO) announced that a membership meeting would be held to consider a draft of a new contract to end the 8-month strike in the Elizabeth, N. J., plant of the Phelps Dodge Copper Products Corp. Under the agreement which was subsequently adopted, one of the Nation's longest strikes was ended. The company granted a wage increase of 18½ cents an hour. (Source: Labor, Sept. 14, 1946, and daily press.) The Phelps Dodge Copper Products Corp. and the International Union of Mine, Mill, and Smelter Workers (CIO) had reached an agreement on June 30, 1946, providing for an 18½ cent hourly wage increase, thereby ending the strike of 5,500 workers which began on March 20, 1946 (Source: U. S. Dept. of Labor release of Sept. 12, 1946, and daily press), after the NWSB had announced general pre-approval of wage or salary increases in the nonferrous metal industry of not to exceed 18½ cents an hour. (See Chron. item for May 24, 1946, MLR, Aug. 1946.)
- Sept. 7. The NWSB announced approval for pricing purposes (see Chron. item for Feb. 14, 1946, MLR, May 1946) of 5 cents of an 8-cent general wage increase granted to workers in the cotton-textile industry on August 5, 1946 (see Chron. item for Jan. 19, 1946, MLR, May 1946) for 65,000 of the 90,000 workers in northern cotton mills and 7,000 workers in southern mills. (Source: NWSB-94.)
- Sept. 12. The President proclaimed the week of October 6 to 12, 1946, as National Employ the Physically Handicapped Week. The action was taken in compliance with a joint resolution of Congress approved on August 11, 1945. The President stated that about 225,000 disabled veterans were listed with the United States Employment Service and that an additional 75,000 handicapped persons were seeking employment. (Source: White House release of Sept. 12, 1946.)
- Sept. 17. The International Brotherhood of Teamsters (AFL) and several of the largest truck operators agreed to a 40-hour week (formerly 44) and a wage increase of \$7.40 weekly, thereby setting the pattern for the settlement of the strike by 15,000 truck workers in the New York City area, which had seriously crippled commercial life. (Source: Labor, Sept. 21, 1946.)
- On September 1, the strike started, when the union's wage proposals were refused. The stoppage spread quickly to include workers in nearby States, who walked out in sympathy with the New York workers. (Source: MLR, Oct. 1946, p. 594.)
- Sept. 20. The executive bureau of the World Federation of Trade Unions met in Washington, D. C. Arthur Deakin of Great Britain was unanimously elected provisional president of WFTU. (Source: Congress of Industrial Organizations release of Sept. 24, 1946.)
- Sept. 22. The Mayor of New York City announced the establishment of the Division of Labor Relations which he hoped would have as a long range policy "to anticipate and prevent" disputes. (Source: AFL Weekly News Service, Sept. 24, 1946, and daily press.)



1946

Sept. 23. The Secretary of Labor made public the first report on the usefulness of fact-finding boards in providing a sound alternative to the strike, lock-out, or other form of industrial warfare. "The procedure of fact finding and recommendations by a properly qualified governmental board, while still in an experimental state, in our opinion holds much promise of filling the vacuum" which exists owing to the resistance of both labor and management to a legislatively imposed system of compulsory arbitration, and the fact that voluntary arbitration is not "a generally accepted pattern and is not likely to become such in the near future." (Source: U. S. Dept. of Labor release of Sept. 23, 1946; for discussion, see MLR, this issue, p. 774.)

Sept. 30. The collective agreements between three maritime unions and their employers lapsed, thereby creating the second Nation-wide maritime crisis in recent weeks (see Chron. item for Aug. 24, 1946, this issue). The unions involved are the National Marine Engineers Beneficial Association (CIO) and the International Longshoremen's and Warehousemen's Union (CIO)—both being members of the Committee of Maritime Unity (see Chron. item for June 14, 1946, MLR, Aug. 1946)—and the Masters, Mates and Pilots of America (AFL). (Source: CIO News, Sept. 30, 1946, p. 12, and BLS records.)

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## Recent Publications of Labor Interest

November 1946

### Agriculture

*Postwar economic policy and planning: Postwar agricultural policies.* Tenth report of the House Special Committee on Postwar Economic Policy and Planning, pursuant to H. Res. 60 \* \* \*. Washington, U. S. Government Printing Office, 1946. 41 pp., charts. (House report No. 2728, 79th Cong., 2d sess.; Union calendar No. 854.) 10 cents.

Particular emphasis is placed on the relationship of agriculture to other parts of the national economy, with a view to promoting a balanced expansion with rising living standards and efficient full production in all segments.

*Employment and wages of the hired farm working force in 1945, with special reference to its population composition.* By Louis J. Ducoff and Margaret Jarman Hagood. Washington, U. S. Department of Agriculture, Bureau of Agricultural Economics, 1946. 40 pp.; mimeographed.

The report summarizes the findings of the special survey made in January 1946 by the Bureau of the Census of persons 14 years of age and over who had done any farm work for wages during 1945. Explanatory and statistical data are included on the size and composition of the labor force and on wages and perquisites.

*Landbrugsstatistik, 1944.* Copenhagen, Statistiske Departement, 1945. 222 pp. (Statistiske meddelelser, 4 række, 125 bind, 1 hæfte.) Kr. 2, Gyldendalske Boghandel, Copenhagen.

Statistical report on Danish agriculture for 1944, with some data for previous years. Includes chapters on the agricultural labor force and on earnings (1944-45 season) in agriculture. A table of contents in French and French translations of some table heads are furnished.

### Child and Youth Employment

*16-year minimum age for employment—a postwar goal for protection of the Nation's children.* Washington, U. S. Department of Labor, Division of Labor Standards, Child Labor and Youth Employment Branch, 1946. 6 pp. Free.

The purpose of the proposed standard is discussed as well as the extent to which it is met in existing State laws.

*Why child labor laws?* By Lucy Manning. Washington, U. S. Department of Labor, Children's Bureau, 1946. 13 pp., illus. (Publication No. 313.) 10 cents, Superintendent of Documents, Washington.

*Your community and its young people, their employment and educational opportunities.* Washington, U. S. Department of Labor, Children's Bureau, 1946. 31 pp., bibliography. (Publication No. 316.) Free.

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

*Progress, plans, and objectives, September 1, 1943, to September 1, 1945: A report of the first 2 years of the Big Brother Movement's Vocational Department.* New York, Big Brother Movement (207 Fourth Avenue), 1945. 20 pp.; mimeographed.

In the period covered, the vocational department helped 580 boys in Metropolitan New York and the vocational counselor interviewed 2,174. The report includes data on number and types of jobs obtained and on other activities.

### Cooperative Movement

*Research practices and problems of farmers' regional associations.* By Martin A. Abrahamsen. Washington, U. S. Department of Agriculture, Farm Credit Administration, Cooperative Research and Service Division, 1946. 73 pp.; processed. (Miscellaneous report No. 96.)

The study was based on 13 of the largest regional farmers' cooperative wholesale associations in the United States (including 8 that handle consumer goods), and 3 interregional associations. Covers their activities in business and industrial research, basic considerations in establishing an effective research program, and application of research techniques to educational programs.

*Delivery efficiency of petroleum cooperatives affiliated with Southern States Cooperative, Inc.* By J. Warren Mather. Washington, U. S. Department of Agriculture, Farm Credit Administration, Cooperative Research and Service Division, 1946. 104 pp., maps, charts; processed. (Miscellaneous report No. 95A.) Free.

Report on an intensive study of the operating methods of 10 local (retail) cooperative petroleum associations. A summary of this report was issued as miscellaneous report No. 95.

*Segundo congreso nacional de cooperativas en Bogotá, Mayo 1945.* Bogotá, Editorial Pax, 1945. 318 pp., illus.

Proceedings of the second national congress of cooperative associations in Colombia. Subjects dealt with included the various types of associations (consumers', transport, credit, agricultural, housing), education, amendment of legal provisions, and steps for the formation of a National Federation of Cooperatives.

*First annual report of the Department of Cooperation and Cooperative Development of the Province of Saskatchewan, for the twelve months ended April 30, 1945.* Regina, 1946. 85 pp., charts.

Saskatchewan was the first Canadian Province to provide for an office whose sole duty was to study and promote cooperatives. The first report of its Department of Cooperation and Cooperative Development reviews developments in the cooperative field (including legislation) during the year under consideration, reports on the work of the department, and gives detailed statistics of the various types of cooperatives for 1944 (generally with comparative data for one or more previous years).

### Economic and Social Problems

*Fiscal policy to fight inflation.* New York, Committee for Economic Development, 1946. 21 pp. 25 cents.

The Research and Policy Committee of the Committee for Economic Development presents a 7-point program to curb inflation. The Committee states that the most important and desirable step is the expansion of production by means of efforts of management, labor, and government to increase productivity.

*Trend of corporate profits, 1929-45.* By Gardner F. Derrickson. (In Survey of Current Business, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Washington, April 1946, pp. 9-19. 20 cents, Superintendent of Documents, Washington.)

*Twenty-sixth annual report of the National Bureau of Economic Research.* By Arthur F. Burns. New York, National Bureau of Economic Research, Inc., 1946. 69 pp. Free.

In part I, entitled "Economic research and the Keynesian thinking of our times," the author raises various questions regarding current economic thinking and stresses the need for further research for the testing of prevailing views. An appendix contains an extensive tabulation showing "salient economic changes" from 1923 to 1939. Part II outlines the recent work of the National Bureau of Economic Research and some of its plans for the future.



## Employment and Unemployment

*Total number of nurses employed for public health work in the United States, in the Territories of Hawaii and Alaska, and in Puerto Rico and the Virgin Islands on January 1 of the years 1942 to 1946.* Washington, Federal Security Agency, Public Health Service, 1946. 14 pp.; processed.

In addition to the information indicated in the title, the tabulation shows, by State, the number and educational qualifications of nurses employed by different types of agencies, January 1, 1946.

*Annual review of employment and pay rolls in Canada, 1945.* Ottawa, Department of Trade and Commerce, Bureau of Statistics, 1946. 97 pp., charts; processed.

*Évolution du chômage en France depuis la libération.* (In *Revue Française du Travail*, Ministère du Travail et de la Sécurité Sociale, Paris, July 1946, pp. 366-372.)

A study of unemployment in France, including totals of assisted unemployed, 1935-39, and statistics in considerable detail, by region, age of unemployed, etc., October 1944-May 1946.

*Oslo Arbeidskontor, 1945.* Oslo, Arbeidskontor, 1946. 47 pp.

Report on the work of the Oslo Employment Office for 1945, with a summary for the period of German occupation from April 1940 to May 1945 and some comparative data for previous years.

*The Uganda employment ordinance, 1946, and the employment rules, 1946.* Entebbe, Uganda Protectorate, Government Printer, 1946. 40 pp.

## Handicapped Workers

*The deaf worker in industry.* By George Lavos and Earl W. Jones. (In *American Annals of the Deaf*, Menasha, Wis., March 1946, pp. 154-176. 50 cents.)

Efficiency of 56 deaf workers in a large war plant is compared with that of the average "hearing" worker. Four-fifths of the group were machine operators or assembly workers. They were rated by foremen on ability to produce, to adjust on the job, and to minimize their hearing defect. Productivity factors considered included care of materials, regard for safety, absenteeism, speed and quality of work, etc. As a rule, the deaf worker was rated equal to or better than the hearing worker in all significant respects.

*The Disabled Persons (Employment) Act, [Great Britain], 1944—the quota and designated employments schemes.* London, Ministry of Labor and National Service, 1946. 8 pp.

*Provision of employment in South Wales for persons suspended from the mining industry on account of silicosis and pneumoconiosis.* London, Board of Trade, [1946]. 6 pp. (Cmd. 6719.) 1d. net, His Majesty's Stationery Office, London.

## Industrial Accidents and Accident Prevention

*Kansas accidental death report, 1946 edition.* Topeka, State Board of Health, 1946. 23 pp., charts, illus.

Occupational fatalities for the State as a whole and on farm work (the principal industry) showed practically no abatement during 1945.

*Watch your step, avoid farm accidents.* Washington, U. S. Department of Agriculture, 1946. 32 pp., chart, illus. (Miscellaneous publication No. 608.) 10 cents, Superintendent of Documents, Washington.

Prepared by the Safety Council of the Department of Agriculture, this pamphlet covers accident and health hazards in and about farm buildings, including the home, as well as on the land.

*Federal mine safety code for bituminous-coal and lignite mines of the United States, July 24, 1946.* Washington, U. S. Department of the Interior, Bureau of Mines, 1946. 84 pp. 25 cents, Superintendent of Documents, Washington.

- Explosions and fires in bituminous-coal mines.* Washington, U. S. Department of the Interior, Bureau of Mines, 1946. 107 pp., bibliography, diagrams, illus. (Miners' circular No. 50; Coal-mine accident-prevention course, section 4.) 25 cents, Superintendent of Documents, Washington.
- Electrical and mechanical hazards in metal mines.* Washington, U. S. Department of the Interior, Bureau of Mines, 1946. 82 pp., bibliography, diagrams, illus. (Miners' circular No. 56; Metal-mine accident-prevention course, section 6.) 20 cents, Superintendent of Documents, Washington.
- Fire hazards of the plastics industry.* New York, National Board of Fire Underwriters, 1946. 53 pp. (Research report No. 1; M65.)
- Employee organization for fire safety.* Boston, Mass., National Fire Protection Association, 1945. 40 pp., diagrams, illus. 25 cents.
- Pour libérer l'homme de la machine.* (In *Revue du Travail*, Ministère du Travail et de la Prévoyance Sociale de Belgique, Brussels, May-June 1946, pp. 426-428.)
- Address by L.-E. Troclet, Belgian Minister of Labor and Social Welfare, on occasion (February 20, 1946) of installation of the Superior Council on Safety and Hygiene, which is to head the new program for promoting safety and hygiene in industrial and commercial establishments of Belgium.
- Consideraciones acerca de los accidentes del trabajo en la República Dominicana.* By Jacinto R. Mañón Gottós. [Ciudad Trujillo], Editorial "La Nación" de Luis Sánchez Andújar, 1944. 60 pp.
- Discussion and statistics of industrial accidents in the Dominican Republic.

### Industrial Relations

- Grievance procedure under collective bargaining.* Washington, U. S. Bureau of Labor Statistics, 1946. 12 pp. (Serial No. R. 1847; reprinted from *Monthly Labor Review*, August 1946.) Free.
- How to arbitrate a labor dispute.* By Theodore W. Kheel. New York, Prentice-Hall, Inc., 1946. 20 pp.
- Explains types of arbitration and suggests procedures to follow in choosing an arbitrator and in conducting hearings. Examples of arbitration awards are included.
- Collective bargaining for engineers.* By Waldo E. Fisher. Pasadena, California Institute of Technology, Industrial Relations Section, 1946. 4 pp. (Reprinted from *Engineering and Science Monthly*, June 1946.)
- Settlement of industrial disputes in seven foreign countries.* Washington, U. S. Bureau of Labor Statistics, 1946. 12 pp. (Serial No. R. 1848; reprinted from *Monthly Labor Review*, August 1946.) Free.
- L'arbitrage en pratique avant la guerre.* By Maurice Chachuat. (In *Revue Française du Travail*, Ministère du Travail et de la Sécurité Sociale, Paris, August 1946, pp. 440-453, charts.)
- Analytical account of the development and operation of arbitration of industrial disputes in prewar France, with detail on the conciliation and arbitration law of March 4, 1938, and a critical and suggestive conclusion.
- La participation ouvrière.* By Jacques-René Rabier. Paris, Éditions Domat Montchrestien, 1945. 29 pp.
- Brief study of worker participation in the proceeds and the management of business in France, on the thesis that the French economy cannot be rebuilt on a nineteenth century basis. Contains short sections on English, United States, and Russian experience in this connection.
- Contrato colectivo de trabajo suscrito entre la Federación Sindical de Trabajadores Petroleros de Venezuela y las compañías petroleras que operan en el país.* [Caracas?], Federación Sindical de Trabajadores Petroleros de Venezuela, 1946. 21 pp.
- This collective agreement between workers and operating companies in the petroleum industry of Venezuela covers the period from June 1, 1946, to December 31, 1947.

*A selected bibliography on industrial relations.* Kingston, Ontario, Queen's University, Department of Industrial Relations, 1946. 77 pp. (Bull. No. 11.) \$1.

Lists material published in Canada, Great Britain, the United States, and certain other countries.

### Industry Reports

*The changing status of bituminous-coal miners, 1937-46.* Washington, U. S. Bureau of Labor Statistics, 1946. 10 pp. (Bull. No. 882; reprinted from *Monthly Labor Review*, August 1946.) 5 cents, Superintendent of Documents, Washington.

*Coal mining industry: Annual statistical statement of the costs of production, proceeds, and profits of the coal mining industry for the year 1945.* London, Ministry of Fuel and Power, 1946. 9 pp. (Cmd. 6851.) 2d. net, His Majesty's Stationery Office, London.

The data are presented by district and include earnings per man-shift worked, average weekly earnings per wage earner, and total wages paid during the year in the British coal industry.

*Nationalization of coal.* London, Labor Party, 1946. 18 pp., map. (Labor discussion series, No. 7.) 2d. net.

Summarizes the Act for the nationalization of the British coal industry, surveys the present state of the industry, and outlines short-term and long-term policies for its reorganization.

*Board of Trade working party reports: Hosiery.* London, His Majesty's Stationery Office, 1946. 224 pp., map. 3s. 6d. net.

Study by a committee appointed to consider proposals for improvement of organization, production, and distribution in the British hosiery industry. Considerable information on labor is included.

Other industries for which similar reports have been published are cotton (see *Monthly Labor Review*, September 1946, p. 475), boots and shoes, and pottery.

*Byggnadsverksamheten i Sverige år 1944.* Stockholm, Socialstyrelsen, 1946. 61 pp., charts.

Report on the building industry in Sweden. Data on wages are given in a tabulation of building costs in Stockholm and in rural Sweden, 1939-46. Table of contents and résumé in French.

*Postwar prospects for American textiles—an introductory report.* By Archibald M. McIsaac, James G. Smith, John W. Cadman, Jr. Washington, Textile Foundation, 1946. 30 pp., charts. \$1.

Includes a brief discussion of wage rates, labor costs, and labor relations.

*Australian textile mills—a guide to good working conditions.* Melbourne, Department of Labor and National Service, Industrial Welfare Division, 1946. 54 pp., charts, illus. (Bull. No. 7.)

The greater part of the bulletin deals with the effects of atmospheric conditions on operatives and manufacturing processes, and the attainment of satisfactory mill climates for both.

### Labor and Social Legislation

*Leyes sociales de Bolivia sancionadas por la H. Convención Nacional de 1944 y promulgadas por el Gobierno Villarroel.* La Paz, Ministerio del Trabajo, Salubridad y Previsión Social, [1946]. 158 pp.

Labor and social legislation enacted during the regime of the Villarroel government in Bolivia.

*Provincial labor standards concerning child labor, annual holidays, hours of work, minimum wages, and workmen's compensation [in Canada].* Ottawa, Department of Labor, August 1946. 11 pp.; mimeographed.

*Sovjetunionens sociallovgivning.* By Eugenie Engberg. Copenhagen, Socialt Tidsskrift, 1946. 96 pp., illus.

Survey of social legislation in the Soviet Union.



*Recopilación legislativa, anuario correspondiente al año 1944.* Madrid, Ministerio de Trabajo, 1946. 890 pp.

This general compilation of laws enacted in Spain in 1944 includes labor and social legislation.

### Labor Organizations

*Union security.* Washington, U. S. Bureau of Labor Statistics, 1946. 70 pp.; mimeographed. Free.

Preliminary draft of the section on this subject to be incorporated in the revision of Bureau of Labor Statistics bulletin No. 686, Union agreement provisions, published in 1942.

*Directory of labor organizations, Territory of Hawaii.* Honolulu, Department of Labor and Industrial Relations, Bureau of Research and Statistics, September 1946. 14 pp.; mimeographed. (No. 9.)

*Wartime developments in trade-union organization in India.* (In International Labor Review, Montreal, May-June 1946, pp. 349-363. 50 cents. Distributed in United States by Washington Branch of I. L. O.)

### Minimum Wage

*Progress of State minimum-wage legislation, 1943-45.* By Alice Angus and Loretta Sullivan. Washington, U. S. Bureau of Labor Statistics, 1946. 12 pp. (Serial No. R. 1841; reprinted from Monthly Labor Review, May 1946, with additional data.) Free.

*Salarios mínimos que regiran en el país [Costa Rica] durante un año a partir del 1º de julio de 1946 (decreto No. 10 de 10 de junio de 1946).* San José, Secretaría de Trabajo y Previsión Social, 1946. 64 pp.

### Negro in Industry

*Negro workers in the building trades in selected cities.* New York, National Urban League, 1946. 12 pp.; mimeographed.

Appraisal of the prospects of Negro workers for employment in the emergency housing program, stressing the need for training in the building trades, and for equality in admission of skilled craftsmen to union membership. Brief summaries of conditions affecting Negro workers in specified cities are included.

*Racial aspects of reconversion.* New York, National Urban League, 1945. 29 pp.

Statement of conditions which the League considers of national significance in the fields of employment, housing, education, health, veterans' status, postwar military personnel, and race relations.

*Report of the Connecticut Inter-racial Commission.* [Hartford], December 1945. 46 pp.

### Occupational Diseases

*Outline of occupational disease control through engineering.* Washington, U. S. Department of Labor, Division of Labor Standards, 1946. 36 pp.; processed. (Bull. No. 83.) Free.

*The new occupational disease merit rating plan [in Ohio] explained.* By George L. Coffinberry. (In Monitor, Ohio Industrial Commission, Columbus, August 1946, pp. 115, 116.)

Occupational-disease experience is merit rated separately from accident experience under the new system which became effective in Ohio on July 1, 1946.

*American standard allowable concentration of trichloroethylene, approved August 6, 1946.* New York, American Standards Association, 1946. 7 pp., bibliography. (Z37.19-1946.) 30 cents.

### Occupations

*Career opportunities.* Edited by Mark Morris [Morris Bartel Schnapper]. Washington, Progress Press, 1946. 354 pp. \$3.25.

For each of about 100 occupations, the book gives a description of duties and discusses who should or should not take up the occupation, how to qualify for it, the outlook, earnings, and related jobs.

*Industrial films—a source of occupational information.* Washington, U. S. Department of Labor, Employment Service, Occupational Analysis and Industrial Services Division, 1946. 72 pp., illus. 20 cents, Superintendent of Documents, Washington.

Contains an annotated list of 51 films representing 18 industries, and a bibliography of industrial film catalogs and periodicals.

*Occupations—a selected list of pamphlets.* By Gertrude Forrester. New York, H. W. Wilson Co., 1946. 240 pp. \$2.25.

*Establishing and operating a heating and plumbing contracting business.* By Lawrence P. Mutter and Kenneth R. Davis. Washington, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, 1946. 139 pp., forms. (Industrial (small business) series No. 36.) 30 cents, Superintendent of Documents, Washington.

*Jobs in industrial relations.* Minneapolis, University of Minnesota, Industrial Relations Center, 1946. 42 pp.; mimeographed. (Release No. 2.)

Descriptions of some of the principal industrial-relations jobs in labor and business organizations.

### Personnel Management

*Job evaluation and employee rating.* By Richard C. Smyth and Matthew J. Murphy. New York and London, McGraw-Hill Book Co., Inc., 1946. 255 pp. \$2.75.

Different methods of job evaluation and employee rating are analyzed from the management standpoint of equitable compensation of employees on the basis of nature of work performed, its current competitive value in the community or industry, and the effectiveness with which it is done.

*Personnel administration and civil service—a selected list of references.* Washington, U. S. Civil Service Commission, Library, May 1946. 32 pp.; processed.

List of materials published in recent years, dealing with the broader aspects of personnel administration.

### Postwar Reconstruction

*Reconversion in New England.* Washington, U. S. Bureau of Labor Statistics, 1946. 25 pp. (Serial No. R. 1845; reprinted from *Monthly Labor Review*, July 1946.) Free.

*Workers' experiences during first phase of reconversion.* Washington, U. S. Bureau of Labor Statistics, 1946. 18 pp. (Bull. No. 876; reprinted from *Monthly Labor Review*, May 1946, with additional data.) 10 cents, Superintendent of Documents, Washington.

### Prices and Price Control

*Gas and electricity, price changes in 1945.* Washington, U. S. Bureau of Labor Statistics, 1946. 10 pp. (Serial No. R. 1838; reprinted from *Monthly Labor Review*, April 1946, with additional data.) Free.

*Typical residential electric bills, cities of 2,500 population and more—typical net monthly bills as of January 1, 1946.* Washington, Federal Power Commission, 1946. 60 pp. 25 cents.

*Labor participation in the [U. S.] Office of Price Administration.* By John L. Afros. (In American Political Science Review, Menasha, Wis., June 1946, pp. 458-484. \$1.)

Account of the origin, structure, functions, inter-relationships, and achievements of the OPA Labor Office, national Labor Policy Committee, local labor advisory committees, labor participation on local war price and rationing boards, and the labor liaison set-up.

The author concludes that "there is no one best form" of labor representation in administrative agencies. "It may be that the wartime experience will have demonstrated . . . that the best form is that which is best suited to the structure and function of the particular agency." However, "the concept of functional participation may prove a useful device for making representative democracy work better."

*Price trends and price control in foreign countries since VE-day.* Washington, U. S. Bureau of Labor Statistics, 1946. 14 pp. (Bull. No. 873; reprinted from Monthly Labor Review, May 1946.) 5 cents, Superintendent of Documents, Washington.

### Social Security

*Amendments to Social Security Act.* Hearings, February-June 1946, before the Committee on Ways and Means, House of Representatives, 79th Congress, 2d session, on social security legislation. Washington, U. S. Government Printing Office, 1946. 3 vols., 1574 pp.

Volume 1 of the hearings covers old-age and survivors' insurance; volume 2, public assistance; and volume 3, unemployment compensation.

*Caja de Seguro y Ahorro Obrero, 1943-45—III memoria.* La Paz, Caja de Seguro y Ahorro Obrero, 1945. 126 pp., charts, pasters.

Account of the accomplishments of the Bolivian Government in the field of social welfare, 1943-45.

*La sécurité sociale—léislation et réglementation depuis la libération du territoire jusque fin 1945.* Brussels, Ministère du Travail et de la Prévoyance Sociale, [1946?]. 268 pp.

Compilation of laws and regulations on various phases of social security (for general workers, miners, and seamen) enacted in Belgium between December 1944 and the end of 1945. Since liberation, social-security legislation has been largely rewritten and modernized; this volume provides a convenient collection of otherwise scattered laws, decrees, instructions, etc.

*Les projets de réforme de la sécurité sociale en Italie.* By Franco Agostini. (In Revue Française du Travail, Ministère du Travail et de la Sécurité Sociale, Paris, August-September 1946, pp. 454-458.)

Brief description of social-security organization under latter-day fascism, with reasons for lack of reform by the provisional governments since liberation, and suggestions of the General Confederation of Labor.

*Report of the New Zealand Social Security Department for the twelve months ended March 31, 1946.* Wellington, 1946. 11 pp. 6d.

In addition to the data on operation of the Social Security Department during the year, the report describes the new social-security benefits provided for in legislation enacted late in 1945 (see Monthly Labor Review, June 1946, p. 927).

*A short survey of social assistance work in Portugal (1128-1945).* [Lisbon, Secretaria do Nacional da Informação, 1945?] 168 pp., illus. In English.

The text of the law governing social assistance, and statistics of social assistance in 1942, are given in appendixes to the report.

### Vacations and Holidays

*Vacations.* Washington, U. S. Bureau of Labor Statistics, September 1946. 54 pp.; mimeographed. Free.

Preliminary draft of the section on this subject to be incorporated in the revision of Bureau of Labor Statistics bulletin No. 686, Union agreement provisions, published in 1942.



*Vacation and holiday practices.* New York, National Industrial Conference Board, Inc., 1946. 35 pp. (Studies in personnel policy, No. 75.)  
Current vacation and holiday practices of a considerable number of companies in the United States and Canada are summarized.

*Holidays—a study of the postwar problem and the field of noncommercial enterprise.*  
By National Council of Social Service, [London]. London, etc., Oxford University Press, 1945. 84 pp., illus. 3s. 6d. net.

### *Veterans' Affairs*

*Educational opportunities for veterans.* By Francis J. Brown. Washington, Public Affairs Press, 1946. 142 pp., bibliography, charts. \$2.

Discussion of both the problems of and opportunities afforded to veterans in obtaining education with public aid.

*Planning programs for veterans in rural areas.* By Edwin R. Hoskins. Ithaca, N. Y., Cornell University Agricultural Experiment Station, 1945. 57 pp., map. (Bull. No. 825.)

The resources of central New York State were analyzed and evaluated from the standpoint of reeducating and reestablishing the veterans.

*Rental housing for veterans.* Washington, U. S. National Housing Agency, Federal Housing Administration, 1946. 33 pp., forms, plans, illus.

Designed to stimulate interest in construction, by private industry, of rental housing for veterans. Illustrations show typical housing projects financed through mortgages insured by the Federal Housing Administration.

*Veterans' Emergency Housing Program, Volume 1, No. 3.* Washington, U. S. National Housing Agency, Office of the Housing Expediter, August 1946. 16 pp., charts.

The third issue of this new monthly report contains discussion and statistics on housing progress during the first 7 months of 1946, and on requirements for and production of building materials, together with other pertinent information.

The first number of the publication was entitled "Housing"; with the second number, the title was changed to "Veterans' Emergency Housing Program."

*Smaller companies urged to use services of disabled veterans.* By F. W. Knauth. (In Industry, Boston, September 1946, pp. 32, 34. 35 cents.)

The experience of larger manufacturers with handicapped employees shows, it is stated, that they carry their share of the work and possess many attributes that other employees do not have.

*Veterans information directory: A guide to national, State, and local agencies through which ex-servicemen can obtain government benefits and private aid in the fields of business, employment, education, agriculture, social service, rehabilitation, etc.* Washington, Public Affairs Press, 1946. 131 pp. \$2.

### *Wages and Hours of Labor*

*Occupational wage relationships, Series 1: No. 3, Foundries, 1945; No. 4, Machine tools, 1945; No. 5, Electric light and power, 1945.* Washington, U. S. Bureau of Labor Statistics, 1946. Variously paged; processed. Free.

*Wage structure, Series 2: No. 10, Aircraft engines and parts, 1945; No. 11, Power boilers, 1945; No. 13, Office workers—metalworking, 1945; No. 14, Electric generating and distribution equipment, 1945; No. 16, Structural clay products, 1945; No. 17, Military tanks, 1945.* Washington, U. S. Bureau of Labor Statistics, 1946. Variously paged; processed. Free.

*Union wages and hours of motortruck drivers and helpers, July 1, 1945.* Washington, U. S. Bureau of Labor Statistics, 1946. 42 pp., chart. (Bull. No. 874; reprinted from Monthly Labor Review, January 1946, with additional data.) 10 cents, Superintendent of Documents, Washington.

*Wages and conditions in American Newspaper Guild contracts, June 10, 1946.* New York, American Newspaper Guild, 1946. 225 pp.; processed.

*Prevailing wages and hours of employees in power laundries and dry-cleaning establishments, eating and drinking establishments, the dairy industry, and the motion-picture industry, Honolulu, Hawaii, April 1946.* Honolulu, Department of Labor and Industrial Relations, Bureau of Research and Statistics, 1946. 4 reports, 17, 15, 2, 6 pp., respectively; mimeographed. (Bulletins Nos. 19-22.)

*Lönestatistik årsbok för Sverige, 1944.* Stockholm, Socialstyrelsen, 1946. 155 pp., charts.

Report on wages in industry, agriculture, forestry, roadwork, transportation, hotels and restaurants, handicrafts, public services, etc., in Sweden in 1944, with some data for previous years. Wage rates for the 1944-45 season in agriculture and forestry are given. Table of contents and résumé in French.

*Adjustments of wages to changes in cost of living (escalator clauses in collective-bargaining agreements).* Washington, U. S. Bureau of Labor Statistics, October 1946. 21 pp.; mimeographed. Free.

*Legality of wage readjustment plans under the overtime provision of the [Federal] Fair Labor Standards Act.* (In University of Chicago Law Review, June 1946, pp. 486-498. 75 cents.)

Traces the interpretation by the courts of the portion of the Act which provides that time and a half shall be paid for overtime work.

*Problems in the administration of wages.* By Lloyd G. Reynolds. New Haven, Conn., Yale University, Labor and Management Center, 1946. 8 pp. (Reprint No. 3, from Advanced Management, March 1946.)

Discussion of the interrelationships among wages, prices, volume of production, and productivity of labor, with some comments on such problems as diversification of the wage structure and a guaranteed income for wage earners.

### General Reports

*Housing, social security, and public works.* By Ramsay Wood, Eliot J. Swan, Walter F. Stettner. Washington, Board of Governors of the Federal Reserve System, 1946. 94 pp. (Postwar economic studies, No. 6.) 25 cents.

Consists of three monographs: Housing needs and the housing market; Economic aspects of social security; Public works and services in the postwar economy.

*Labor conditions in Latin America.* Washington, U. S. Bureau of Labor Statistics, 1946. 27 pp. (Serial No. R. 1842, Latin American series No. 24; reprinted from Monthly Labor Review, February and May 1946.) Free.

Contains three articles: Employment situation in Latin America; Price trends and price control since VE-day; Revision of Venezuelan labor law of 1936.

*Belgium in transition.* Edited by Smith Simpson. (In Annals of the American Academy of Political and Social Science, Vol. 247, Philadelphia, September 1946, pp. v-viii, 1-186. \$2.50 (\$2, paper cover) to nonmembers.)

Analysis by Belgian authorities of some of Belgium's long-run (rather than transitory) postwar economic, political, and social problems, edited by the labor attaché at the United States Embassy in Brussels. The 32 studies cover: Liberation and reconstruction (14 articles, including 1 each on coal and cooperatives and 2 on trade unions); social problems (11 articles), including nutrition, housing, and social security; some economic problems (3 articles), including agriculture and unemployment; and international relations (4 articles).

*First annual report of the Department of National Health and Welfare, Canada, for the fiscal year ended March 31, 1945.* Ottawa, 1946. 79 pp.

The various branches of the Department whose activities are reviewed in the report include the Industrial Hygiene, National Physical Fitness, Nutrition, and Family Allowances Divisions.

*Les problèmes posés par l'emploi des prisonniers de guerre.* By Jean Denizet. (In Revue Française du Travail, Ministère du Travail et de la Sécurité Sociale, Paris, June 1946, pp. 218-229.)

Review of problems arising from use of prisoner-of-war labor in France, covering organization for handling such labor; methods of protecting French labor; policy of paying, feeding, and clothing prisoner-of-war laborers; and other problems. A statistical table shows the distribution of prisoner-of-war laborers among various industries.

*Annual report on the work of the Labor Department, [Jamaica], for the year 1944.* Kingston, 1946. 25 pp.

Includes information on cost of living (index numbers), employment and unemployment, unemployment relief, industrial disputes, industrial accidents, minimum-wage machinery, and other matters.

*The Anglo-Palestine yearbook, 1946.* London and Tel-Aviv, Anglo-Palestine Publications, Ltd., 1946. 384 pp., maps, charts, illus. 25s.

The first issue of this general yearbook for Palestine. It covers agricultural, industrial, and financial development since the inception of the British administration of the country, and includes sections on labor, the cooperative movement, public health and medical services, and social welfare.

*Communism in action: A documented study and analysis of communism in operation in the Soviet Union.* Prepared at the instance and under the direction of Representative Everett M. Dirksen of Illinois by the Legislative Reference Service of the Library of Congress. Washington, U. S. Government Printing Office, 1946. 141 pp. (House document No. 754, 79th Cong., 2d sess.) 25 cents, Superintendent of Documents, Washington.

Description of operation of the economic, political, and social institutions of the Soviet Union. Chapters IV, V, and VI deal, respectively, with labor, forced labor, and living standards. Discussed are such topics as labor legislation, labor discipline, trade unions, wages, distribution of consumer goods, housing, social security, and social services.

*Annual report of the Labor Department, Uganda Protectorate, for the year ended December 31, 1945.* Entebbe, 1946. 16 pp., charts. 2s.

An appendix to the report shows the average basic monthly wage rate, cost-of-living allowance or war bonus if given, and number of hours worked per day, for each of a long list of occupations.

*Bollettino e Rassegna del Lavoro, Vol. I, No. 1.* Venice, Ufficio Regionale del Lavoro, November 1945. 72 pp. 330 lire per year.

The first number of a publication on labor, industry, and related topics, to be issued monthly by the Regional Labor Office of Venice.





# MONTHLY **LABOR REVIEW**

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

\*\*\*\*\* + LAWRENCE R. KLEIN, Editor + \*\*\*\*\*

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## *This Issue in Brief*

### *State and regional variations in prospective labor supply*

Prospective changes in the labor force during the current decade vary widely by State and region, ranging from an increase of 25 to 45 percent on the Pacific Coast to a decrease of 1 to 5 percent in the West North Central States. The variations are described and the factors causing them are discussed in the article beginning on page 851.

### *Postwar work stoppages caused by labor-management disputes*

During the 12-month period following VJ-day, 4,630 work stoppages due to labor-management disputes occurred. These controversies directly involved nearly 5,000,000 workers and resulted in about 120,000,000 man-days of idleness. The period was characterized by large-scale stoppages in such industries as coal, steel, automobiles, electrical manufacturing, meat packing, and transportation. Wages were the major issue in most of the disputes, although other factors, such as union security and health and welfare benefits, also played a prominent role in some controversies. There were 42 stoppages each affecting 10,000 or more workers. Page 872.

### *Productivity changes since 1939*

Productivity trends varied widely from industry to industry during the war period. In munitions production, output per man-hour rose sharply as mass-production methods were applied and new techniques developed. Many industries producing goods for civilian use were handicapped by scarcity of new equipment, restrictions on production, and shortages of labor and materials. In the mining industries, output per man-hour rose at approximately the prewar pace, despite many wartime difficulties; in railroad transportation, electric power, and agriculture, there were unusually sharp gains in productivity. Output per man-hour in manufacturing industries will probably increase rapidly during the coming period because wartime difficulties will not prevail and large amounts of new equipment will be installed. Further increases in productivity may also be anticipated in nonmanufacturing industries after readjustment to peacetime operations is completed. Page 893.

### *The physically impaired worker in industry*

As a group, the first 4,000 seriously impaired workers studied in the Bureau's survey of 10,000 such workers compared favorably with a group of 6,500 unimpaired workers. The group of impaired workers were as efficient as the unimpaired, had the same absenteeism rate, and had only two-thirds the number of disabling injuries. In nearly all of the 47 plants surveyed, impaired workers were placed on jobs at which their impairments did not handicap them. They were found in a great variety of occupations, most of them on the production line. Page 918.

### *Veterans return to the Nation's factories*

More than twice as many veterans were employed in manufacturing industries in July 1946 as in December 1945. About half of all veterans on factory pay rolls were employed in 8 major industrial groups, in which earnings averaged \$45 or better over the entire 8-month period. Veterans comprised a greater proportion of the hires in the durable than in the nondurable component of manufacturing. Total separation rates for veterans, including quits, discharges, and lay-offs, were consistently higher than for nonveterans. Since quits represent at least three-fourths of veteran separations and higher quit rates are characteristic of new employees, the higher veteran separation rates should not be overemphasized. Veterans quitting jobs in iron and steel, machinery (except electrical), and automobiles accounted for at least 30 percent of all veteran quits over the entire period studied. The veteran discharge and lay-off rates were generally lower than for nonveterans in the early part of the period, but the differences practically disappeared owing to the greater job seniority of nonveterans. Page 924.

### *Labor requirements in southern pine lumber production*

The production of 1,000 board feet of dressed lumber in the southern pine area in early 1946 required a total of 41.2 man-hours of labor from the felling of the tree to the loading of the freight car. This was an increase of 34 percent from the 30.7 man-hours required in 1935 when the last survey was made. All processing departments showed increases in labor requirements over the 11-year period, fewer man-hours being needed only for shipping and administration. The increases reflected the shortage of experienced workers, the sparseness of the timber stands, and the increased production of low-grade hardwoods. These factors far outweighed the limited improvements in mechanization. Page 941.

### *Prices in third quarter of 1946*

The price advance during the third quarter of 1946 was greater than the entire increase from the hold-the-line order in the spring of 1943 to June 1946. Consumers' prices rose 9½ percent and wholesale prices 9.8 percent. The dominant influence continued to be the huge effective demand from consumers and industry for goods and services, which still far exceeded supply. Prices rose sharply during the period from June 30 to July 25, when price controls were temporarily suspended. Passage of the Price Control Extension Act of 1946 on July 25 generally restored controls in effect on June 30; but the new act exempted a number of agricultural commodities from price control and contained certain important provisions which resulted in further price increases later in the quarter. Page 979.

## CURRENT LABOR STATISTICS

V

Current Statistics of Labor Interest in Selected Periods <sup>1</sup>

[Available in reprint form]

Item	Unit or base period	1946			1945	1939: Average for year
		October	September	August	October	
<i>Employment and unemployment</i>						
Civilian labor force (BC): Total	Thousands	59,310	59,440	60,000	53,110	<sup>2</sup> 54,230
Male	do	42,140	42,170	42,830	34,590	<sup>2</sup> 40,950
Female	do	17,170	17,270	17,170	18,520	<sup>2</sup> 13,280
Employed <sup>3</sup>	do	57,360	57,370	57,960	51,560	<sup>2</sup> 46,930
Male	do	40,600	40,590	41,250	33,660	<sup>2</sup> 35,600
Female	do	16,760	16,780	16,710	17,900	<sup>2</sup> 11,330
Nonagricultural	do	48,840	48,630	48,830	42,770	<sup>2</sup> 37,430
Agricultural	do	8,520	8,740	9,130	8,790	<sup>2</sup> 9,500
Unemployed	do	1,950	2,070	2,040	1,550	<sup>2</sup> 7,300
Male	do	1,540	1,580	1,580	930	<sup>2</sup> 5,350
Female	do	410	490	460	620	<sup>2</sup> 1,950
Civilian employment in nonagricultural establishments: Total <sup>4</sup>	do	40,250	40,129	39,871	36,327	30,353
Manufacturing	do	14,761	14,731	14,583	13,048	10,078
Mining	do	825	827	828	718	845
Construction <sup>4</sup>	do	2,085	2,103	2,091	1,006	1,753
Transportation and public utilities	do	3,988	3,948	4,001	3,825	2,912
Trade	do	8,034	7,918	7,814	7,331	6,618
Finance, service, and miscellaneous	do	5,208	5,155	5,160	4,698	4,160
Federal, State, and local government, excluding Federal force-account construction	do	5,350	5,447	5,394	5,701	3,988
Military personnel	do	2,488	2,501	2,812	11,519	367
Production-worker employment:						
Manufacturing	do	12,021	12,016	11,882	10,450	8,192
Bituminous-coal mining	do	334	335	337	262	371
Class I steam railroads, including salaried employees (ICC)	do	1,376	1,362	1,371	1,397	988
Hired farm workers (BAE)	do	2,624	2,777	2,786	2,494	<sup>5</sup> 3,280
<i>Hours and earnings</i>						
Average weekly hours:						
Manufacturing	Hours	40.4	40.3	40.5	41.6	37.7
Bituminous-coal mining	do		41.4	42.4	<sup>6</sup> 42.3	27.1
Retail trade	do		40.9	41.5	<sup>6</sup> 40.4	43.0
Building construction (private)	do	38.8	38.7	38.2	38.7	32.6
Average weekly earnings:						
Manufacturing		\$45.68	\$45.41	\$44.98	\$40.97	\$23.86
Bituminous-coal mining			\$61.00	\$62.37	<sup>6</sup> \$52.73	\$23.88
Retail trade			\$33.76	\$33.81	<sup>6</sup> \$29.17	\$21.17
Building construction (private)		\$59.20	\$58.49	\$56.67	\$54.05	\$30.39
Average hourly earnings:						
Manufacturing		\$1.130	\$1.126	\$1.111	\$0.985	\$0.633
Bituminous-coal mining			\$1.480	\$1.468	<sup>6</sup> \$1.261	\$0.886
Retail trade			\$0.906	\$0.891	<sup>6</sup> \$0.792	\$0.536
Building construction (private)		\$1.526	\$1.510	\$1.482	\$1.396	\$0.933
Average straight-time hourly earnings in manufacturing, using—						
Current employment by industry			\$1.091	\$1.075	<sup>6</sup> \$0.945	\$0.622
Employment by industry as of January 1941			\$1.093	\$1.078	<sup>6</sup> \$0.942	\$0.640
Quarterly farm wage rate, per day without board (BAE)		\$4.94			\$4.39	<sup>6</sup> \$1.57
<i>Industrial injuries and labor turn-over</i>						
Industrial injuries in manufacturing per million man-hours worked			17.0	18.5	<sup>6</sup> 18.3	15.4
Labor turn-over per 100 employees in manufacturing:						
Total separations		6.1	6.9	6.6	8.6	<sup>2</sup> 2.9
Quits		4.6	5.3	5.3	5.6	<sup>2</sup> 0.9
Lay-offs		1.0	1.0	0.7	2.3	<sup>2</sup> 1.8
Total accessions		6.7	7.1	7.0	8.6	<sup>2</sup> 5.9
<i>Labor-management disputes</i>						
Work stoppages beginning in month:						
Number		450	450	500	474	218
Number of workers involved	Thousands	290	380	235	551	98
All work stoppages during month:						
Number of man-days idle	do	4,500	5,000	3,425	8,611	1,484
Man-days idle as percent of available working time		0.6	0.8	0.5	1.4	0.28

See footnotes at end of table.



## Current Statistics of Labor Interest in Selected Periods—Continued

Item	Unit or base period	1946			1945	1939: Average for year
		October	September	August	October	
<i>Prices</i>						
Consumers' price index (moderate-income families in large cities): All items.....	1935-39=100	148.4	145.9	144.1	128.9	99.4
Food.....	1935-39=100	180.0	174.1	171.2	139.3	95.2
Clothing.....	1935-39=100	167.0	165.9	161.2	148.5	100.5
Rent.....	1935-39=100		108.8	108.7	<sup>6</sup> 108.3	104.3
Fuel, electricity, and ice.....	1935-39=100	114.4	114.4	113.7	110.5	99.0
Housefurnishings.....	1935-39=100	167.6	165.6	160.0	146.9	101.3
Miscellaneous.....	1935-39=100	130.8	129.9	129.8	124.7	100.7
Retail food price index (large cities): All foods.....	1935-39=100	180.0	174.1	171.2	139.3	95.2
Cereals and bakery products.....	1935-39=100	138.5	137.3	135.4	109.1	94.5
Meats.....	1935-39=100	<sup>8</sup> 190.7	188.5	186.6	131.0	96.6
Dairy products.....	1935-39=100	202.4	186.6	180.1	133.3	95.9
Eggs.....	1935-39=100	214.6	193.3	173.6	185.5	91.0
Fruits and vegetables.....	1935-39=100	176.5	176.4	178.3	172.5	94.5
Beverages.....	1935-39=100	166.5	162.0	126.6	124.7	95.5
Fats and oils.....	1935-39=100	147.9	151.4	180.3	124.0	87.7
Sugar and sweets.....	1935-39=100	167.5	141.5	140.3	126.5	100.6
Wholesale price index: All commodities.....	1926=100	134.1	124.0	129.1	105.9	77.1
All commodities other than farm products.....	1926=100	127.1	117.2	121.9	101.0	79.5
All commodities other than farm products and foods.....	1926=100	115.7	112.2	111.6	100.1	81.3
Farm products.....	1926=100	165.3	154.3	161.0	127.3	65.3
Foods.....	1926=100	157.9	131.9	149.0	105.7	70.4
<i>National income and expenditures</i>						
National income payments (BFDC).....	Millions.....	\$14,763	\$14,317	\$13,481	\$13,531	<sup>5</sup> \$6,327
Consumer expenditures for goods and services (BFDC).....	do.....			<sup>7</sup> \$30,165	<sup>7</sup> \$25,480	<sup>7</sup> \$15,460
Retail sales (BFDC).....	do.....	\$8,803	\$8,199	\$8,556	\$7,124	<sup>5</sup> \$3,748
<i>Production</i>						
Industrial production index, unadjusted (FR): Total.....	1935-39=100	185	184	180	164	100
Manufactures.....	1935-39=100	192	191	186	171	109
Minerals.....	1935-39=100	146	149	147	125	106
Bituminous coal (BM).....	Thousands of short tons.	56,000	51,080	54,830	39,192	32,905
Car loadings index, unadjusted (FR).....	1935-39=100	149	149	145	128	101
Electric energy (FPC): Total.....	Millions of kw.-hr.	24,388	22,788	23,669	21,464	<sup>(9)</sup>
Utilities (production for public use).....	do.....	20,188	18,805	19,515	17,662	<sup>11</sup> 11,637
Industrial establishments.....	do.....	4,200	3,983	4,154	3,802	<sup>(9)</sup>
<i>Construction</i>						
Construction expenditures.....	Millions.....	\$1,229	\$1,250	\$1,244	\$542	<sup>5</sup> \$645
Value of urban building construction started.....	do.....	\$332	\$341	\$412	\$267	<sup>(9)</sup>
New nonfarm family dwelling units.....		59,500	65,800	82,100	30,100	<sup>5</sup> 42,900

<sup>1</sup> Source: Bureau of Labor Statistics unless otherwise indicated. Abbreviations used: BC (Bureau of the Census); ICC (Interstate Commerce Commission); BAE (Bureau of Agricultural Economics); BFDC (Bureau of Foreign and Domestic Commerce); FR (Federal Reserve); BM (Bureau of Mines); FPC (Federal Power Commission). Most of the current figures are preliminary.

<sup>2</sup> 10-month average—March to December 1940—not comparable with later figures. Revisions are in process.

<sup>3</sup> Excludes employees on public emergency work, these being included in unemployed civilian labor force. Civilian employment in nonagricultural establishments differs from nonagricultural employment in civilian labor force mainly because of the inclusion in the latter of such groups as self-employed and domestic and casual workers.

<sup>4</sup> Includes workers employed by construction contractors and Federal force-account workers (nonmaintenance construction workers employed directly by the Federal Government). Other force-account and nonmaintenance construction employment is included under manufacturing and other groups.

<sup>5</sup> October.

<sup>6</sup> September.

<sup>7</sup> Second quarter.

<sup>8</sup> Estimated from available data. Meat shortages again severe in some cities.

<sup>9</sup> Not available.

# MONTHLY LABOR REVIEW

DECEMBER 1946

## State and Regional Variations in Prospective Labor Supply<sup>1</sup>

LABOR, business, and government groups engaged in labor-market analysis or concerned with problems of maintaining high levels of employment need some quantitative measure of prospective labor supply in their particular States or regions. An estimate of the total number of persons who will be working or seeking work provides a framework for the analysis of a variety of social and economic problems relating to employment, industrial location, marketing, housing, and social security. This article contains basic information on long-term trends and wartime developments in labor-force growth which will assist in the preparation of such an estimate for each of the 48 States.<sup>2</sup> The prospective 1950 labor force in each State under three different assumptions as to postwar labor supply developments is shown in table 4 (page 870). Anticipated labor-force changes between 1940 and 1950 range from an increase of 25 to 45 percent on the Pacific Coast to a decrease of 1 to 5 percent in the West North Central States.

Two types of data are presented here for use in estimating the size of each State's labor force in 1950, a year when short-run dislocations of the postwar transition period are expected to be over.

First, the base figure shown is the "normal" labor force in 1950—the work force that would have been expected if peacetime trends in labor-market participation and interstate migration had continued after 1940 and if economic conditions similar to those of 1940 had prevailed. The normal estimates, although not predictions of the actual size of the labor force in each State, provide a basis from which realistic estimates may be made. They also highlight differences in State and regional patterns of labor-force growth which are not likely to change in the near future.

Second, data are presented on the wartime changes in the labor force of each State. This material will aid in estimating the extent to which the actual size of the labor force in 1950 may differ from the normal level.

<sup>1</sup> Prepared by Lester M. Pearlman and Leonard Eskin in the Bureau's Occupational Outlook Division. Sophia C. Mendelsohn and Mary J. Levy assisted in the formulation of estimating procedures and supervised the statistical operations.

<sup>2</sup> More detailed data and a description of the technical procedures used to obtain the estimates presented here will appear in a forthcoming bulletin of the Bureau of Labor Statistics.

# Normal Growth of the Labor Force, 1940 to 1950

## NATIONAL CHANGES

A brief examination of normal labor-force projections for the Nation as a whole between 1940 and 1950 shows a number of broad trends in population growth and labor-market participation which operate in all States. In addition, the national trends serve as a background against which State and regional variations can be studied.

TABLE 1.—"Natural" and "Normal" Labor-Force Growth, by State, 1940 to 1950<sup>1</sup>

Region, division, and State	Labor force, 1940 <sup>2</sup> (in thousands)	"Natural" labor-force projection, 1950 <sup>3</sup>		"Normal" labor-force projection, 1950 <sup>4</sup>	
		Number (in thousands)	Percent of change from 1940	Number (in thousands)	Percent of change from 1940
(1)	(2)	(3)	(4)	(5)	
UNITED STATES.....	54,778	60,830	11.0	60,830	11.0
NORTH.....	32,627	35,289	8.2	34,618	6.1
New England.....	3,757	4,082	8.6	4,062	8.1
Maine.....	343	384	12.0	373	8.7
New Hampshire.....	215	234	8.8	242	12.6
Vermont.....	147	161	9.5	157	6.8
Massachusetts.....	1,917	2,077	8.3	2,033	6.1
Rhode Island.....	335	366	9.3	367	9.6
Connecticut.....	800	860	7.5	890	11.2
Middle Atlantic.....	12,249	13,233	8.0	13,074	6.7
New York.....	6,188	6,571	6.2	6,501	5.1
New Jersey.....	1,928	2,065	7.1	2,098	8.8
Pennsylvania.....	4,133	4,597	11.2	4,475	8.3
East North Central.....	11,203	12,086	7.9	12,109	8.1
Ohio.....	2,865	3,089	7.8	3,071	7.2
Indiana.....	1,379	1,494	8.3	1,516	9.9
Illinois.....	3,485	3,697	6.1	3,677	5.5
Michigan.....	2,202	2,418	9.8	2,495	13.3
Wisconsin.....	1,272	1,388	9.1	1,350	6.1
West North Central.....	5,418	5,888	8.7	5,373	-0.8
Minnesota.....	1,142	1,242	8.8	1,218	6.7
Iowa.....	992	1,069	7.8	1,007	1.5
Missouri.....	1,579	1,698	7.5	1,599	1.3
North Dakota.....	244	277	13.5	214	-12.3
South Dakota.....	248	279	12.5	221	-10.9
Nebraska.....	519	569	9.6	463	-10.8
Kansas.....	694	754	8.6	651	-6.2
SOUTH.....	16,303	19,314	18.5	19,104	17.2
South Atlantic.....	7,249	8,625	19.0	8,844	22.0
Delaware.....	119	128	7.6	140	17.6
Maryland.....	797	879	10.3	948	18.9
District of Columbia.....	358	380	6.1	413	15.4
Virginia.....	1,072	1,256	17.2	1,307	21.9
West Virginia.....	657	791	20.4	767	16.7
North Carolina.....	1,388	1,736	25.1	1,716	23.6
South Carolina.....	763	966	26.6	951	24.6
Georgia.....	1,277	1,577	23.5	1,538	20.4
Florida.....	818	912	11.5	1,064	30.1
East South Central.....	4,050	4,833	19.3	4,645	14.7
Kentucky.....	1,037	1,217	17.4	1,171	12.9
Tennessee.....	1,114	1,308	17.4	1,266	13.6
Alabama.....	1,058	1,300	22.9	1,229	16.2
Mississippi.....	841	1,008	19.9	979	16.4

See footnotes at end of table.



TABLE 1.—"Natural" and "Normal" Labor-Force Growth, by State, 1940 to 1950 <sup>1</sup>—Continued

Region, division, and State	Labor force, 1940 <sup>2</sup> (in thousands)	"Natural" labor-force projection, 1950 <sup>3</sup>		"Normal" labor-force projection, 1950 <sup>4</sup>	
		Number (in thousands)	Percent of change from 1940	Number (in thousands)	Percent of change from 1940
(1)	(2)	(3)	(4)	(5)	
<b>SOUTH—Continued.</b>					
West South Central.....	5,004	5,856	17.0	5,615	12.2
Arkansas.....	704	827	17.5	764	8.5
Louisiana.....	919	1,082	17.7	1,088	18.4
Oklahoma.....	834	983	17.9	820	-1.7
Texas.....	2,547	2,964	16.4	2,943	15.5
<b>WEST.....</b>					
.....	5,848	6,227	6.5	7,108	21.5
Mountain.....	1,580	1,797	13.7	1,856	17.5
Montana.....	233	250	7.3	240	3.0
Idaho.....	198	223	12.6	237	19.7
Wyoming.....	104	115	10.6	119	14.4
Colorado.....	437	481	10.1	489	11.9
New Mexico.....	184	229	24.5	243	32.1
Arizona.....	187	222	18.7	255	36.4
Utah.....	187	226	20.9	213	13.9
Nevada.....	50	51	2.0	60	20.0
Pacific.....	4,268	4,430	3.8	5,252	23.1
Washington.....	742	765	3.1	843	13.6
Oregon.....	470	487	3.6	559	18.9
California.....	3,056	3,178	4.0	3,850	26.0

<sup>1</sup> Data presented in this table cover total labor force including armed forces. All data at April seasonal level. Annual average for total United States is about three-fourths of a million higher.

<sup>2</sup> Data from 1940 census have been revised upward for comparability with current census series. Preliminary, pending release of official revision of United States total by Bureau of the Census.

<sup>3</sup> This projection assumes (1) continuation of prewar trends in the percentage of the population that works or seeks work; (2) economic conditions in 1950 similar to those of 1940; and (3) no interstate migration between 1940 and 1950.

<sup>4</sup> Assumption (1) and (2) same as above, but interstate migration between 1940 and 1950 assumed to be twice the 1935-40 volume.

Estimates of normal labor force for the United States have been constructed by projecting 1920 to 1940 relationships between population and labor force through the decade 1940-50.<sup>3</sup> The decennial increases in the labor force and population from 1920 to 1940 and the normal increase from 1940 to 1950 are shown in the following tabulation:

	Increase (in thousands)		
	1920-30	1930-40	1940-50 (normal)
Population, 14 years of age and over: Total.....	14,957	12,002	9,205
Male.....	7,134	5,466	3,920
Female.....	7,823	6,536	5,285
Labor force: Total.....	<sup>1</sup> 7,359	5,895	6,052
Male.....	<sup>1</sup> 5,110	3,276	2,570
Female.....	<sup>1</sup> 2,249	2,619	3,482

<sup>3</sup> Since data for 1920 are not available on a "labor force" basis, the 1920-30 change refers to "gainful workers."

<sup>4</sup> Labor-force projections for the United States as a whole appearing in this article represent preliminary revisions by the authors of estimates prepared by the Bureau of the Census and published in *Population, Special Reports, Series P-44 No. 12*, Bureau of the Census (Washington), June 12, 1944. The revisions are designed to be consistent with current Census estimates which are based on a revised interviewing procedure adopted in July 1945. See Bureau of the Census, *Monthly Report on the Labor Force*, especially MRLF No. 39, September 20, 1945.

Despite the expected decline in the rate of population growth and an assumed continuation of past trends toward longer schooling and earlier retirement, the projected increment to the labor force during this decade is somewhat larger than the increase recorded during the 1930's.

The long-term trend toward an increasing number of women workers is the major factor supporting the large normal labor-force growth during the current decade. Over the years, it has been possible for a larger proportion of women to work outside the home because of greater mechanization of household and industrial processes, increasing urbanization, decline in the birth rate, and social attitudes more favorable to the employment of women.

On the basis of peacetime expectations, the national labor force in 1950 would number about 60.8 million persons—43.6 million men and 17.2 million women.<sup>4</sup>

#### STATE AND REGIONAL VARIATIONS

The rate of expansion of the national labor force during the decade 1940-50 represents the net effect of widely varying rates among the States. Differences in the birth rate and interstate migration play the leading roles in causing these variations.

#### *Differential Fertility and Natural Labor-Force Growth*

In the absence of migration, the South would be expected to have the fastest growing labor force in the Nation between 1940 and 1950. This is attributable to the high birth rates which prevail in the predominantly rural Southern States. Rural areas throughout the country have significantly higher fertility rates than urban areas. Regional differences in the "natural" rate of labor-force growth<sup>5</sup> are as follows:

	<i>Natural growth in the labor force, 1940-50 (percent)</i>
United States.....	11
North.....	8
South.....	18
West.....	6

In the broad region called the South,<sup>6</sup> the labor force of only two States, Delaware and Maryland (which are not typical of the other Southern States), would be expected to grow at a slower rate between 1940 and 1950 than the 11-percent natural increase anticipated for the Nation as a whole (table 1, column 3). The labor force in

<sup>4</sup> All data presented in this article cover total labor force including the armed forces. Projections are made at April seasonal level (the time of year when the decennial census is usually taken). On an annual average basis, the United States total labor force would be about three-fourths of a million higher.

<sup>5</sup> The "natural" rate of labor-force growth is here defined as the projected rate of growth, assuming no interstate migration.

<sup>6</sup> Regional classifications used in this article are the same as those used by the Bureau of the Census. See tables for States included in each region.

North Carolina, South Carolina, Georgia, and Alabama would be expected to grow more than twice as fast as the national labor force. In 24 out of 32 States in the North and West, the natural rate of labor-force growth would fall below the corresponding rate for the Nation. The lowest rates of labor-force growth in the country would prevail in the geographic division embracing the trio of Pacific Coast States—California, Oregon, and Washington.

In every State the natural rate of increase in the labor force is very much greater for women than for men. This reflects the increasing participation of women workers as well as the declining proportion of boys and older men in the labor force. In the absence of interstate migration, the number of male workers in the Pacific Coast States, Nevada, and the District of Columbia would be expected to decline between 1940 and 1950, but these decreases would be more than offset by gains in the number of women workers.

*Replacement rates.*—Thus far natural labor-force growth has been dealt with only in terms of *net* changes between 1940 and 1950. But these net changes result from differences between the number of persons who enter the labor market and the number who leave. The accessions to and separations from the labor force are analyzed in this section, not only to indicate their magnitude, but also to highlight State differences in the competitive position of new entrants to the labor market. The analysis is confined to male workers because the movements of women in and out of the labor market are complicated by changes in marital and family status.

Areas of relatively high birth rates and comparatively young population will have more new workers entering the labor force and fewer older workers leaving than areas where the population is relatively old. In the South, for example, some 3,895,000 young men (exclusive of in-migrants) would be expected to enter the labor force between 1940 and 1950, whereas only 2,321,000 would leave because of death or retirement.<sup>7</sup> (See table 2, columns 1 and 2.) This means an average of 168 accessions for every 100 separations—a *replacement rate* of 168. In other words, if there were no migration into or out of the South, every 100 men leaving that region's labor force between 1940 and 1950 would be replaced by 168 new male workers. This rate is much higher than the rates for the North (118) or the West (107). Replacement rates for individual States tend to cluster about the regional average (see chart 1), but there are some exceptions, such as New Mexico, Arizona, and Utah, where replacement rates more nearly resemble those of the South than those of the West. On the other hand, the pattern of labor-market accessions and separations in Delaware, Maryland, District of Columbia, and Florida is more like the North than like the South.

<sup>7</sup> Figures exclude accessions and separations of seasonal or intermittent workers.



The differences in the relation between labor-market accessions and separations are reflected in the composition of the labor force at any one time. If there were no interstate migration between 1940 and 1950, 28 percent of the South's male labor force in 1950 would have less than 10 years' labor-market experience as compared with 24 percent in the North and 23 percent in the West. In South Carolina, one out of every three men in the 1950 labor force would be a new worker added after 1940; in California the corresponding figure would be only one out of every five.

TABLE 2.—"Natural" and "Normal" Accessions, Separations, and Replacement Rates for the Male Labor Force, by State, 1940 to 1950

Region, division, and State	"Natural" <sup>1</sup>			"Normal" <sup>2</sup>		
	Accessions (in thou- sands)	Separations (in thou- sands)	Replace- ment rate (accessions per 100 separations)	Accessions <sup>3</sup> (in thou- sands)	Separations <sup>3</sup> (in thou- sands)	Replace- ment rate (accessions per 100 separations)
	(1)	(2)	(3)	(4)	(5)	(6)
UNITED STATES.....	10,974	8,404	131	10,974	8,404	131
NORTH.....	6,033	5,102	118	6,250	5,818	107
New England.....	664	566	117	740	653	113
Maine.....	72	57	126	84	75	112
New Hampshire.....	39	35	111	56	48	117
Vermont.....	30	25	120	39	36	108
Massachusetts.....	332	287	116	379	362	105
Rhode Island.....	58	47	123	74	62	119
Connecticut.....	133	115	116	186	148	126
Middle Atlantic.....	2,150	1,819	118	2,332	2,126	110
New York.....	983	911	108	1,158	1,151	101
New Jersey.....	321	277	116	430	364	118
Pennsylvania.....	846	631	134	913	780	117
East North Central.....	2,109	1,797	117	2,470	2,143	115
Ohio.....	547	471	116	664	602	110
Indiana.....	277	234	118	368	307	120
Illinois.....	588	541	109	764	735	104
Michigan.....	436	339	129	577	424	136
Wisconsin.....	261	212	123	293	271	108
West North Central.....	1,110	920	121	1,138	1,326	86
Minnesota.....	227	188	121	278	254	109
Iowa.....	207	175	118	243	256	95
Missouri.....	296	259	114	369	404	91
North Dakota.....	61	43	142	54	83	65
South Dakota.....	59	42	140	56	84	67
Nebraska.....	113	90	126	113	169	67
Kansas.....	147	123	120	171	222	77
SOUTH.....	3,895	2,321	168	4,219	2,781	152
South Atlantic.....	1,654	988	167	2,021	1,178	172
Delaware.....	21	18	117	36	25	144
Maryland.....	145	114	127	236	154	153
District of Columbia.....	40	43	93	115	101	114
Virginia.....	248	151	164	355	211	168
West Virginia.....	186	100	186	210	142	148
North Carolina.....	364	172	212	408	224	182
South Carolina.....	201	94	214	226	129	175
Georgia.....	298	167	178	356	242	147
Florida.....	151	129	117	305	176	173

See footnotes at end of table.

TABLE 2.—"Natural" and "Normal" Accessions, Separations, and Replacement Rates for the Male Labor Force, by State, 1940 to 1950—Continued

Region, division, and State	"Natural" <sup>1</sup>			"Normal" <sup>2</sup>		
	Accessions (in thou- sands)	Separations (in thousands)	Replace- ment rate (accessions per 100 separations)	Accessions <sup>3</sup> (in thou- sands)	Separations <sup>3</sup> (in thousands)	Replace- ment rate (accessions per 100 separations)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>SOUTH—Continued.</b>						
East South Central.....	1,034	595	174	1,096	789	139
Kentucky.....	271	159	170	305	226	135
Tennessee.....	271	162	167	316	238	133
Alabama.....	282	148	191	298	214	139
Mississippi.....	210	126	167	234	168	139
West South Central.....	1,207	738	164	1,306	1,018	128
Arkansas.....	189	114	166	219	192	114
Louisiana.....	220	133	165	272	177	154
Oklahoma.....	217	131	166	226	267	85
Texas.....	581	360	161	712	505	141
<b>WEST.....</b>	<b>1,046</b>	<b>981</b>	<b>107</b>	<b>1,830</b>	<b>1,130</b>	<b>162</b>
Mountain.....	371	256	144	580	418	139
Montana.....	47	41	115	71	72	99
Idaho.....	48	34	141	87	61	143
Wyoming.....	22	16	138	46	36	128
Colorado.....	91	73	125	151	128	118
New Mexico.....	54	26	208	91	52	175
Arizona.....	46	28	164	99	56	177
Utah.....	55	29	190	64	48	133
Nevada.....	8	9	89	27	21	129
Pacific.....	675	725	93	1,393	855	163
Washington.....	126	137	92	247	194	127
Oregon.....	79	83	95	178	128	139
California.....	470	505	93	1,063	628	169

<sup>1</sup> Assumes no interstate migration between 1940 and 1950.<sup>2</sup> Assumes interstate migration between 1940 and 1950 to be twice the 1935-40 volume.<sup>3</sup> United States, regional, and divisional totals are less than the sum of their components because they exclude accessions and separations due to migration between States within the United States, region, or division.

State variations in replacement rates should not be interpreted without reference to variations in economic opportunity. A State with a rapidly expanding economy may easily absorb 200 replacements for every 100 persons leaving the labor force, whereas a less fortunate State might have difficulty providing employment opportunity for say 110 replacements. Given *equal* employment opportunity for two States, however, jobs would be harder to find in the one with the higher replacement rate because on the average more workers would be competing for each job opening. The difficulty of finding jobs would be greatly accentuated in a State with both a relatively high replacement rate and relatively low employment opportunity.

Actually, the areas with the highest replacement rates and the greatest rates of natural labor-force growth tend to be the ones where economic opportunity is below par. This disparity between labor

# NATURAL REPLACEMENT RATES FOR THE MALE LABOR FORCE 1940-1950

ASSUMING NO INTERSTATE MIGRATION

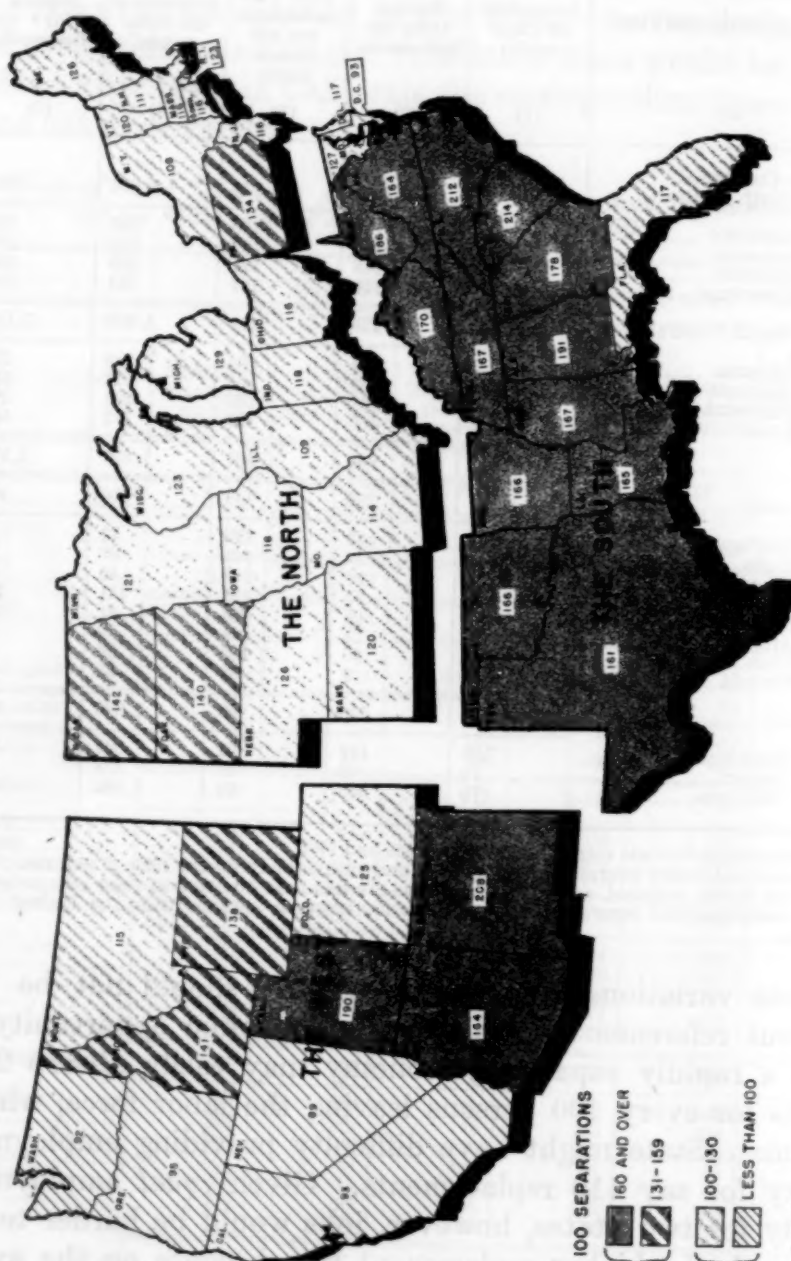


CHART 1

UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS



supply and economic opportunity has resulted in a consistent pattern of internal migration. The South and Great Plains characteristically have been losers in the give and take of population between regions. The West, on the other hand, has been able to draw large numbers of people from other regions of the country, while losing few. The effect of large-scale migration on State variations in labor-force growth is shown in the next section.

#### *Internal Migration and "Normal" Labor-Force Growth*

Because of the extreme importance of population movements to the supply of labor in a given State, the estimates of "normal" labor-force growth include an assumption with respect to interstate migration. For this purpose, the rate of interstate migration between 1935 and 1940 was projected through the decade 1940-50. The "normal" labor force for each State, therefore, consists of a projection of migration movements as well as trends in labor-market participation. In the procedure employed no attempt was made to estimate the *actual magnitude* of migration. But the prewar population movements do reflect a migration *pattern* that prevailed during the war and is likely to carry over into the postwar period.<sup>8</sup>

Since these normal labor force estimates by State assume a prewar migration pattern, there is also implicit the assumption that the prewar distribution of employment opportunity will not shift radically. In view of the past stability in the geographic distribution of economic resources and opportunity, both in years of war and peace,<sup>9</sup> there is a strong likelihood that this distribution will not change significantly in the next 5 years.

Estimates of normal labor-force growth and replacement rates between 1940 and 1950 by State and region including allowance for interstate migration are shown in tables 1 and 2. The introduction of the prewar migration pattern exerts great influence on the State and regional rates of labor-force growth as a comparison of these rates with those computed on a no-migration basis readily indicates (see chart 2).

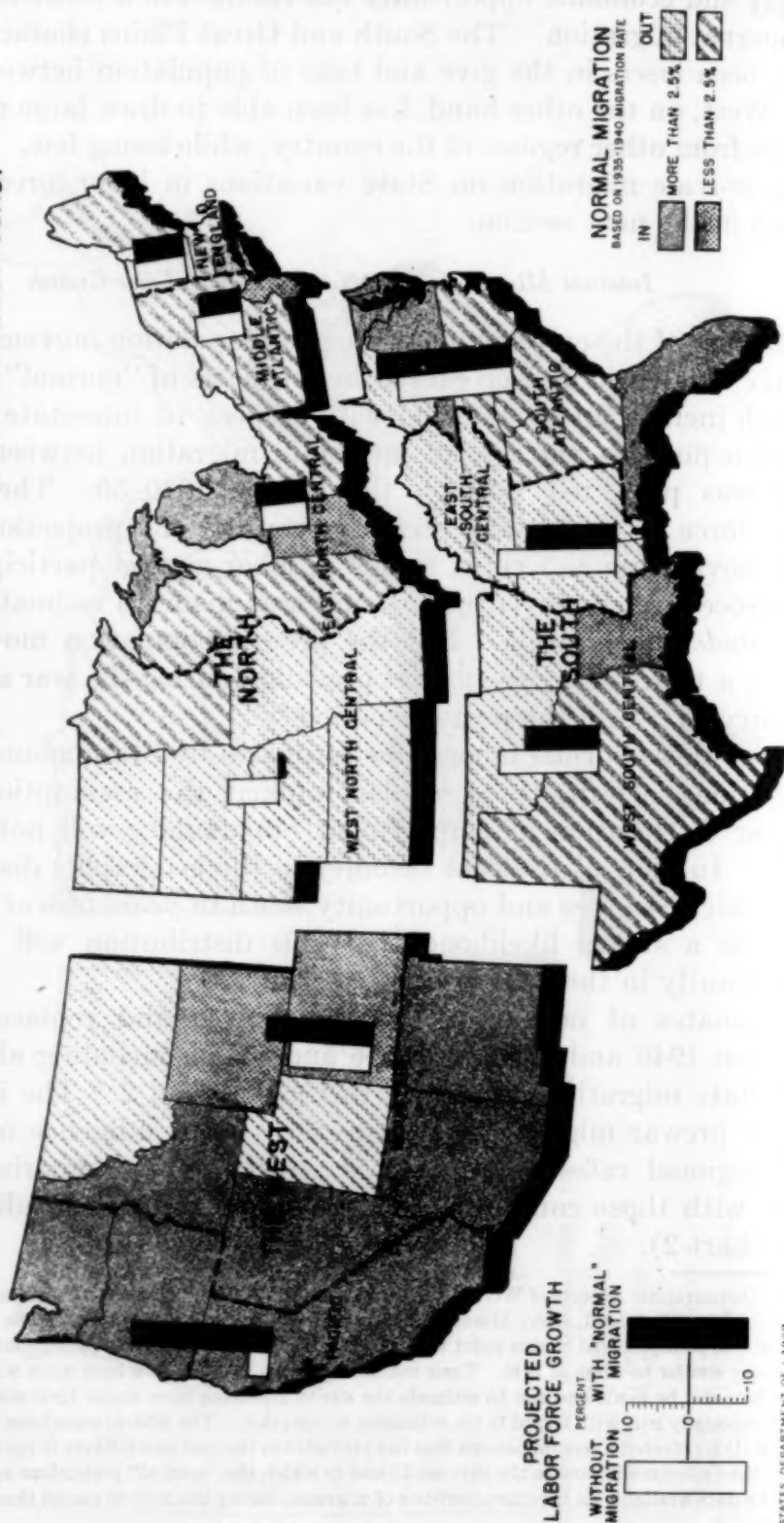
<sup>8</sup> See Demographic Aspects of World War II: Migration. Paper delivered before the American Sociological Society (Cleveland, Ohio, March 1, 1946), by Henry S. Shryock, Jr., and Hope Tisdale Eldridge. It should be reemphasized at this point that the so-called normal labor-force projections assume economic conditions similar to those of 1940. Their main function is to serve as a base upon which more realistic projections can be made and not to estimate the size of the labor force under ideal economic conditions. This is especially true with regard to the migration assumption. The 1935-40 experience was chosen simply because (1) it reflected a general pattern that has prevailed in the past and is likely to continue in the future, (2) the time reference is close to the 1940 conditions to which the "normal" projections apply, and (3) there are more data available on the characteristics of migrants during the 1935-40 period than during any other period.

<sup>9</sup> On this subject see National Resources Committee, *Structure of the American Economy*, Philadelphia, 1939; *Is Industry Decentralizing?* by Daniel Creamer, Philadelphia, 1935; *Growth of American Manufacturing Areas*, by Glenn E. McLaughlin, Philadelphia, 1935; *Regional Distortions Resulting from the War*, in *Survey of Current Business*, October 1943.

# EFFECT OF MIGRATION ON NORMAL LABOR FORCE GROWTH

1940-1950

SOUTH AND GREAT PLAINS, WHERE NATURAL GROWTH OF LABOR FORCE  
OUTSTRIPS OPPORTUNITIES FOR EMPLOYMENT, SUPPLY LABOR TO EXPANDING WEST COAST



UNITED STATES DEPARTMENT OF LABOR  
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Although the West has the slowest rate of natural increase in working population, the great inflow of migrants causes this region to have the fastest growing labor force in the Nation. California's rate of labor-force growth increases from 4 percent to 26 percent when allowance is made for migrant workers. The South, which had the highest rate of natural labor-force growth, runs second to the West when the migration factor is taken into account.

Perhaps the most striking effect of migration on labor-force growth is shown in the Great Plains States where the labor force will actually decline between 1940 and 1950, if the exodus of workers equals or exceeds the prewar rate. And the heavy migration from this region during World War II<sup>10</sup> leaves little doubt that by the end of this decade there will be in fact fewer workers in the area from North Dakota to Oklahoma than there were in 1940. Wartime migration, although creating some new local problems of overcrowding and expansion of populations beyond the peacetime capacities of local economies to support them, was in general a movement from areas of low or declining opportunity to more favorably situated places.

However, there is typically not enough migration from areas of low economic opportunity to drain off the surplus labor supply. Many workers are reluctant to leave familiar surroundings and family ties. The uncertainty and fear attending migration are reinforced by its cost. This is particularly significant, for it is precisely those who should move who usually lack the means to do so. Added to these factors is the general ignorance as to where employment opportunities lie. The war stimulated migration not only because new job opportunities arose but also because they were dramatized and publicized to an unusual degree.

There has been a noteworthy trend toward the development of industry in areas of surplus labor supply. During recent decades, for example, industrialization of the South has been proceeding more rapidly than in the country as a whole. Nevertheless, it appears that the resulting shift in the distribution of employment opportunity has been relatively small. Internal migration will have to continue if all workers are to be afforded useful employment opportunities.<sup>11</sup>

### *Factors Determining Deviation of Labor Force from Normal, 1950*

The 1950 labor force in a given State may differ from a normal based on projection of prewar trends for two principal reasons: (1) the proportion of the population that works or seeks work may

<sup>10</sup> See Bureau of the Census, Population, Special Reports, Series P-46, No. 3 (Washington), February 12, 1946. Migration data for the war and prewar periods will also be presented in the forthcoming bulletin referred to in footnote 2, p. 851.

<sup>11</sup> See Internal Migration and Full Employment, in *Journal of the American Statistical Association*, September 1945.



differ from that yielded by the normal projections; and (2) the actual volume of interstate migration may deviate from the assumed volume. National labor-force growth will be affected primarily by only the first of these factors; State labor-force growth will be influenced by both factors, but principally by the second.

TABLE 3.—*Estimated Deviation of Labor Force From "Normal," by State, April 1945*<sup>1</sup>

[In thousands]

Region, division, and State	Estimated actual labor force <sup>2</sup>	"Normal" labor force projection <sup>3</sup>	Deviation of estimated labor force from "normal"		
			Total	Caused by "abnormal" migration <sup>4</sup>	Caused by participation of "extra" workers
	(1)	(2)	(3)	(4)	(5)
UNITED STATES.....	65,986	58,000	7,986	0	7,986
NORTH.....	38,619	33,781	4,838	60	4,778
New England.....	4,386	3,926	460	58	402
Maine.....	308	358	40	-11	51
New Hampshire.....	229	227	2	-10	12
Vermont.....	147	151	-4	-14	10
Massachusetts.....	2,225	1,985	240	34	206
Rhode Island.....	387	354	33	13	20
Connecticut.....	1,000	851	149	46	103
Middle Atlantic.....	14,069	12,737	1,332	-84	1,416
New York.....	6,920	6,378	542	-154	696
New Jersey.....	2,339	2,028	311	70	241
Pennsylvania.....	4,810	4,331	479	0	479
East North Central.....	13,883	11,705	2,178	258	1,920
Ohio.....	3,689	2,983	706	124	582
Indiana.....	1,776	1,452	324	29	295
Illinois.....	4,200	3,600	600	40	560
Michigan.....	2,747	2,356	391	98	293
Wisconsin.....	1,471	1,314	157	-33	190
West North Central.....	6,281	5,413	868	-172	1,040
Minnesota.....	1,308	1,184	124	-86	210
Iowa.....	1,103	1,002	101	-66	167
Missouri.....	1,865	1,589	276	-8	284
North Dakota.....	254	231	23	-19	42
South Dakota.....	257	236	21	-17	38
Nebraska.....	602	496	106	0	106
Kansas.....	892	675	217	24	193
SOUTH.....	19,660	17,730	1,930	-440	2,370
South Atlantic.....	8,868	8,067	801	-54	855
Delaware.....	144	130	14	3	11
Maryland.....	1,087	874	213	82	131
District of Columbia.....	510	387	123	77	46
Virginia.....	1,399	1,191	208	52	156
West Virginia.....	800	712	88	-58	146
North Carolina.....	1,574	1,553	21	-121	142
South Carolina.....	884	859	25	-62	87
Georgia.....	1,465	1,423	42	-44	86
Florida.....	1,005	938	67	17	50
East South Central.....	4,705	4,350	355	-225	580
Kentucky.....	1,162	1,103	59	-109	168
Tennessee.....	1,349	1,191	158	-12	170
Alabama.....	1,302	1,143	159	-21	180
Mississippi.....	892	913	-21	-83	62

See footnotes at end of table.

TABLE 3.—*Estimated Deviation of Labor Force From "Normal," by State, April 1945*<sup>1</sup>—  
Continued

[In thousands]

Region, division, and State	Estimated actual labor force <sup>2</sup>	"Normal" labor force projection <sup>3</sup>	Deviation of estimated labor force from "normal"		
			Total	Caused by "abnormal" migration <sup>4</sup>	Caused by participation of "extra" workers
	(1)	(2)	(3)	(4)	(5)
<b>SOUTH—Continued.</b>					
West South Central.....	6,087	5,313	774	-161	935
Arkansas.....	826	733	93	-82	175
Louisiana.....	1,054	1,003	51	-11	62
Oklahoma.....	944	830	114	-71	185
Texas.....	3,263	2,747	516	3	513
<b>WEST.....</b>	<b>7,707</b>	<b>6,489</b>	<b>1,218</b>	<b>380</b>	<b>838</b>
Mountain.....	1,848	1,719	129	-57	186
Montana.....	247	237	10	-31	41
Idaho.....	217	217	0	-30	30
Wyoming.....	118	112	6	-6	12
Colorado.....	493	463	30	-15	45
New Mexico.....	202	213	-11	-29	18
Arizona.....	259	221	38	23	15
Utah.....	245	201	44	23	21
Nevada.....	67	55	12	8	4
Pacific.....	5,859	4,770	1,089	437	652
Washington.....	1,028	796	232	78	154
Oregon.....	624	515	109	33	76
California.....	4,207	3,459	748	326	422

<sup>1</sup> Data presented in this table cover total labor force including armed forces.<sup>2</sup> Includes members of armed forces in States from which they were inducted. Preliminary, pending release of Bureau of the Census official estimate of United States total on basis comparable with current census series.<sup>3</sup> Assumes interstate migration between 1940 and 1945 to be equal to the 1935-40 volume.<sup>4</sup> Estimate includes only migrants who would be in labor force on basis of prewar patterns of labor-market participation. Any migrants who were in the labor force in April 1945 but who would not have been workers under normal peacetime conditions are counted in column 5.<sup>5</sup> Revised slightly from United States total of 8.1 million published in Monthly Labor Review for November 1946.

Analysis of the differential impact of the war on the labor force of each State gives insight into the probable postwar deviation of the actual labor force from normal. The wartime expansion of the Nation's labor force to a level approximately 8 million above peacetime expectations was distributed very unevenly among the States. The extent to which these State variations in wartime excess of labor force over normal were caused by differences in degree of recruitment of new workers and by "abnormal" migration is shown in table 3. The two factors may supplement one another or offset each other. For example, the fact that California's wartime labor force exceeded normal by approximately 750,000 workers resulted from the larger than usual inflow of migrants as well as from the more complete utilization of its prewar labor supply. In contrast, outmigration of large numbers of North Carolina's working population offset the "extra" workers drawn into its labor force, so that very little increase over normal took place.

The degree to which wartime change in the labor force of a given State came about through migration rather than through more extensive utilization of the resident labor supply will play a major role in determining the future size of the State's labor force. In general, the effects of migration are likely to be more lasting than the effects of drawing extra workers into the labor force from the resident population.

#### EXTRA WORKERS

Some indication of the extent to which extra workers will remain in the labor market may be obtained by examining the picture for the Nation as a whole. During the war, some 8 million persons who ordinarily would have been housewives, students, retired men, or others not in search of gainful employment were drawn into the Nation's labor force.<sup>12</sup> These included about 4 million youths of school and college age,  $\frac{1}{2}$  million young women aged 20-34; 2 million women over the age of 35; and  $1\frac{1}{2}$  million men over 25.

Two-thirds of the wartime excess labor force caused by the premature entrance of school- and college-age youths into civilian jobs or the armed forces has already disappeared. Further reductions in the number of young workers are expected within the next few years as the prewar trend toward staying in school longer is resumed. With favorable employment opportunities, however, the teen-age labor force may be expected to continue somewhat higher than a projection of prewar trends would indicate, because a greater number of students will probably take advantage of opportunities for part-time and summer work.

About  $1\frac{1}{2}$  million young women aged 20-34 years quit working during the first year of peace, chiefly because their husbands returned from the armed forces or they married returning veterans. The number of young women workers is now actually below the level expected from prewar trends because of the unusually large numbers of marriages and births since 1940. Continuation of a generally high rate of economic activity would keep the number of young women workers below the level anticipated by the normal projections because young women with family responsibilities would not have to work or seek work to the same extent as in 1940.

Among men over 25 years old and women over 35, the wartime expansion in the labor force was a response to a full-employment situation as well as to the Nation's war needs. Jobs were available to those who had previously been considered virtually unemployable and others who had previously preferred retirement or homemaking were

<sup>12</sup> For more complete discussions of the characteristics of extra wartime workers and the factors affecting their continued labor-market participation, see *Sources of Wartime Labor Supply in the United States* in *Monthly Labor Review*, August 1944; "Extra" Workers in the Postwar Labor Force, in *Monthly Labor Review*, November, 1945; and *The Labor Force in the First Year of Peace*, in *Monthly Labor Review*, November 1946.



brought into the labor market by the availability of attractive work at good pay. As long as employment opportunities remain substantially better than those of 1940, the number of workers in the middle and upper age groups is likely to exceed the level indicated by a projection of prewar trends, though not to the same extent as during the war.

When the surplus of middle-aged and older workers is balanced against the deficit of young women workers, however, it is likely that the national labor force will not exceed normal by more than 1½ million, or 2 to 3 percent, in 1950. Thus, in most States, the carry-over from the more complete utilization of labor supply during the war will probably be relatively small. In some States, however—especially those with a large proportion of older men and middle-aged women in the labor force—failure to take account of the extra workers remaining may result in a fairly significant understatement of the available labor supply.

#### INTERSTATE MIGRATION

The extent to which the rate of interstate population movement between 1940 and 1950 will differ from the 1935–40 rate assumed in the normal estimates presented here is far less predictable than the extent to which wartime extra workers will remain in the labor market. Although the *pattern* of wartime migration was very similar to that which had prevailed for some time before the war, the *volume* of 1940–45 civilian migration alone was considerably greater than that of total migration for the 5 prewar years used to compute the “normal” estimates.

The effect of this relatively heavy civilian migration in causing the labor force of each State to deviate from the assumed normal in 1945 is shown in table 3. The deviations from normal arising from migration are much more likely to persist through 1950 than are the deviations caused by the participation of extra workers during the war. Of course, there will be State variations in the extent to which gains and losses through “abnormal” migration are retained. Under certain circumstances the gains and losses may be not merely retained but increased. Whether deviations from normal because of migration are increased, retained, or decreased between 1945 and 1950 will depend on the net result of several opposing forces.

The pent-up migration plans of servicemen have been a major force exerting an upward pressure on the volume of postwar migration. The estimates of actual labor force in April 1945 (table 3) include armed forces in their State of origin, and there may have been considerable migration of ex-servicemen following demobilization. According to an Army survey in the summer of 1944, 1 out of every 10 servicemen did not intend to return to the State in which he lived be-

fore the war.<sup>13</sup> The survey further indicated that the migration of demobilized servicemen would be expected to follow the pattern of prewar and wartime movements of civilians.

If employment is maintained at the current high levels, migration will be further stimulated. There is typically more net interstate population movement in good times than in bad. The existence of opportunity elsewhere generally creates a stronger impetus for migration than the lack of opportunity at home. And in times of depression, the relative security of even a bare subsistence on a farm may be more attractive than the insecurity of going jobless in the city. Moreover, during depression periods there is considerable movement from cities back to farms which is against the prevailing direction of migration. This tends to hold down the net interchange of population between States. In view of the large volume of unemployment that existed during the period 1935-40, the volume of migration during that period (used as a basis for the "normal" estimates) is probably below par for more prosperous times.

On the other hand, migration between 1945 and 1950 may be slowed down by virtue of the large-scale movement during the first half of the decade. The capacity of certain areas to absorb in-migrants may be glutted, at least temporarily, by the tremendous inflows of population during the war. In addition, overexpansion of population in relation to postwar opportunities may cause some reverse migration. The occurrence of a severe depression would also retard the characteristic flow of population from farm to industrial areas.

On balance, if conditions of high employment prevail, the volume of migration between 1945 and 1950 will probably equal or exceed the volume assumed in the "normal" estimates. Even if the rate of migration were to fall below the "normal" rate, during the second half of the decade, the decline would probably not nearly offset the unusually large flow of migrants between 1940 and 1945. In either case, therefore, the volume of migration for the entire decade, 1940-50, would exceed that based on the prewar experience; allowance for this factor should be made when adjusting the "normal" labor-force estimates for 1950.

### *State Estimates of the Labor Force, 1950*

As indicated in the introductory paragraphs of this article, the State estimates of normal labor-force growth and wartime deviations from normal will aid in evaluating the prospective labor supply in each State. The insight which this material provides, however, should be supplemented by other information that is available on the work force of the individual States.

<sup>13</sup> See Postwar Migration Plans of Army Enlisted Men, in *The Annals of the American Academy of Political and Social Science*, March 1945.

Table 4 presents three separate estimates of the 1950 labor force in each State, based on the data presented in tables 1 and 3, but computed on the basis of varying assumptions as to future interstate migration movements. (See p. 870.)

In order to demonstrate the manner in which the data presented in tables 1 and 3 can be used to appraise the wartime experience and postwar prospects of the labor force in individual States, two States with substantially different labor-market characteristics have been selected for more detailed analysis. Assumption B, table 4, is used for purposes of illustration, but it is not necessarily the most reasonable assumption for the particular States involved.

#### IOWA

In 1940, approximately 992,000 Iowans were working or seeking work. Wartime pressures brought the labor force (including armed forces personnel from the State) to a total of 1,103,000 in April 1945—an 11-percent rise. Nevertheless, by 1950, the work force is expected to number less than 970,000—actually below the 1940 level.

The wartime expansion in Iowa's working population represented the net effect of several opposing forces. The main reason for the rise in the labor force was the increased participation of housewives, students, retired persons, and others normally not working. Approximately 167,000 of these "extra" wartime workers entered in response to unusual labor demands. This number was supplemented by about 42,000 entries that would have been expected from natural population growth and continuation of prewar trends in the percentage of the population that works or seeks work. The total inflow of 209,000 into the labor market during the war was partially offset by a net migration from the State of 98,000 civilian workers who might otherwise have participated in Iowa's war effort. The end result was an increase of 111,000 in the labor force between 1940 and 1945.

There is reason to believe, however, that the effect of the wartime out-migration will be more lasting than that of the wartime accessions. Many who left the State during the war are unlikely to return, unless a severe depression should strike the areas to which they moved. Iowa, being a farm State, has customarily exported labor to the expanding industrial areas. Moreover, mechanization of farm processes has made it possible to plant and harvest larger crops with fewer workers. Between 1935 and 1940, the number of persons moving out of Iowa exceeded those moving in by 61,000, and between 1940 and 1945 the State sustained a net loss of an additional 228,000 civilians (including the 98,000 workers mentioned above). These figures do not include any members of the armed forces, originally from Iowa, who may have decided to settle in other States after their discharge. Iowa is likely to continue to lose population to other States, though to a lesser extent than during the war.



Most of the extra workers drawn into the labor force from the resident population of the State are likely to drop out by 1950. In the Nation as a whole, two-thirds of 8 million extra wartime workers quit the labor force during the first year of peace. It is likely that by 1950 those remaining will make up not more than 15 to 20 percent of the wartime total.

Normally, the labor force in Iowa would be expected to grow from the 1940 level of 992,000 to a total of 1,007,000 by 1950. It seems likely, however, in view of the considerations noted above, that the work force in 1950 will be approximately 970,000.

The tabulation which follows summarizes the derivation of the statistics used in the analysis of labor-force developments in Iowa.

	Number (in thousands)	Source
1940 labor force.....	992	Table 1.
1945 labor force.....	1,103	Table 3.
(1) normal labor force.....	1,002	Table 3.
(2) deviation from normal.....	101	Table 3.
(a) caused by participation of "extra" workers.....	167	Table 3.
(b) caused by "abnormal" migra- tion.....	-66	Table 3.
1950 labor force.....	966	1+2 (below).
(1) normal labor force.....	1,007	Table 1.
(2) deviation from normal.....	-41	a+b (below).
(a) caused by participation of "extra" workers.....	25	Assumed to be 15 per- cent of 1945 extra workers (2a above).
(b) caused by "abnormal" migra- tion.....	-66	Assumed same as in 1945 <sup>1</sup> (see 2b above).

<sup>1</sup> It is assumed that the net number of workers who move out of Iowa between 1945 and 1950 will be the same as would be expected on the basis of the 1935-40 experience.

#### WASHINGTON

In response to high wartime demands for labor, the working population of the State of Washington increased by 286,000 between 1940 and 1945 to a total of 1,028,000 (including armed forces personnel from the State). By 1950, the labor force is expected to number roughly 950,000, which is considerably above the 1940 level of 742,000, though short of the wartime peak.

Several factors combined to cause the wartime expansion in Washington's work force. Increased participation of housewives, students, retired persons, and others normally not working accounted for approximately 154,000 of the additional workers. In-migration of workers from other States resulted in a net gain of another 119,000.

The remaining increment of about 13,000 workers is the gain that normally would have been expected from natural population growth and continuation of prewar trends in the percentage of the population that works or seeks work.

It is likely that the great majority of the workers who moved to Washington during the war will remain in the State. Washington has typically been an importer of labor. Between 1935 and 1940, the number of persons moving into the State exceeded those moving out by 80,000. This movement was accelerated between 1940 and 1945 as the State gained an additional 273,000 civilians (including the 119,000 workers mentioned above) through in-migration. These figures do not include any members of the armed forces from other States who may have decided to settle in Washington after their discharge.

Judging from the national experience and prospects, added participation of workers normally outside the labor force will not account for more than 2 or 3 percent of the 1950 labor force in Washington.

On the basis of prewar trends, the labor force in Washington would have been expected to increase from 742,000 in 1940 to 843,000 in 1950. It seems likely, however, in view of the increase during the war that the 1950 labor force will be approximately 950,000.

The following tabulation outlines the derivation of the statistical material used in describing past and prospective labor-force changes in Washington.

	Number (in thousands)	Source
1940 labor force.....	742	Table 1.
1945 labor force.....	1,028	Table 3.
(1) normal labor force.....	796	Table 3.
(2) deviation from normal.....	232	Table 3.
(a) caused by participation of "extra" workers.	154	Table 3.
(b) caused by "abnormal" migra- tion.	78	Table 3.
1950 labor force.....	944	1+2 (below).
(1) normal labor force.....	843	Table 1.
(2) deviation from normal.....	101	a+b (below).
(a) caused by participation of "ex- tra" workers.	23	Assumed to be 15 percent of 1945 ex- tra workers (2a above).
(b) caused by "abnormal" migra- tion.	78	Assumed same as in 1945 <sup>1</sup> (see 2b above).

<sup>1</sup> It is assumed that the net number of workers who move into Washington between 1945 and 1950 will be the same as would be expected on the basis of the 1935-40 experience.

TABLE 4.—*Estimated Labor Force, 1940 and 1945, and Projections, 1950, Under Three Assumptions as to Volume of Interstate Migration*<sup>1</sup>

[In thousands]

Region, division, and State	Estimated labor force		Projected labor force, 1950 <sup>4</sup>		
	1940 <sup>2</sup>	1945 <sup>3</sup>	Assump- tion A	Assump- tion B	Assump- tion C
	(1)	(2)	(3)	(4)	(5)
UNITED STATES.....	54,778	65,986	62,028	62,028	62,028
NORTH.....	32,627	38,619	35,732	35,395	35,455
New England.....	3,757	4,386	4,190	4,181	4,239
Maine.....	343	398	375	370	359
New Hampshire.....	215	229	230	234	224
Vermont.....	147	147	146	145	131
Massachusetts.....	1,917	2,225	2,120	2,098	2,132
Rhode Island.....	335	387	383	383	396
Connecticut.....	800	1,000	936	951	997
Middle Atlantic.....	12,249	14,069	13,281	13,202	13,118
New York.....	6,188	6,920	6,486	6,451	6,297
New Jersey.....	1,928	2,339	2,187	2,204	2,274
Pennsylvania.....	4,133	4,810	4,608	4,547	4,547
East North Central.....	11,203	13,883	12,644	12,655	12,913
Ohio.....	2,865	3,689	3,292	3,282	3,406
Indiana.....	1,379	1,776	1,578	1,589	1,618
Illinois.....	3,485	4,200	3,810	3,801	3,841
Michigan.....	2,202	2,747	2,599	2,637	2,735
Wisconsin.....	1,272	1,471	1,365	1,346	1,313
West North Central.....	5,418	6,281	5,617	5,357	5,185
Minnesota.....	1,142	1,308	1,176	1,164	1,078
Iowa.....	992	1,103	996	966	900
Missouri.....	1,579	1,865	1,683	1,634	1,626
North Dakota.....	244	254	232	201	182
South Dakota.....	248	257	238	209	192
Nebraska.....	519	602	536	479	479
Kansas.....	694	892	756	704	728
SOUTH.....	16,303	19,660	19,125	19,019	18,579
South Atlantic.....	7,249	8,868	8,810	8,918	8,864
Delaware.....	119	144	139	145	148
Maryland.....	797	1,087	1,016	1,050	1,132
District of Columbia.....	358	510	481	497	574
Virginia.....	1,072	1,399	1,356	1,382	1,434
West Virginia.....	657	800	743	731	673
North Carolina.....	1,388	1,574	1,626	1,616	1,495
South Carolina.....	763	884	910	902	840
Georgia.....	1,277	1,465	1,526	1,507	1,463
Florida.....	818	1,005	1,013	1,088	1,105
East South Central.....	4,050	4,705	4,600	4,507	4,282
Kentucky.....	1,037	1,162	1,111	1,087	978
Tennessee.....	1,114	1,349	1,300	1,280	1,268
Alabama.....	1,058	1,302	1,270	1,235	1,214
Mississippi.....	841	892	919	905	822
West South Central.....	5,004	6,087	5,715	5,594	5,433
Arkansas.....	704	826	739	708	626
Louisiana.....	919	1,054	1,083	1,086	1,075
Oklahoma.....	834	944	859	777	706
Texas.....	2,547	3,263	3,034	3,023	3,026

See footnotes at end of table.



TABLE 4.—*Estimated Labor Force, 1940 and 1945, and Projections, 1950, Under Three Assumptions as to Volume of Interstate Migration*<sup>1</sup>—Continued

[In thousands]

Region, division, and State	Estimated labor force		Projected labor force, 1950 <sup>4</sup>		
	1940 <sup>2</sup>	1945 <sup>3</sup>	Assump- tion A	Assump- tion B	Assump- tion C
	(1)	(2)	(3)	(4)	(5)
WEST.....	5,848	7,707	7,171	7,614	7,994
Mountain.....	1,580	1,848	1,796	1,827	1,770
Montana.....	233	247	220	215	184
Idaho.....	198	217	204	211	181
Wyoming.....	104	118	113	115	109
Colorado.....	437	493	477	481	466
New Mexico.....	184	202	209	217	188
Arizona.....	187	259	263	280	303
Utah.....	187	245	245	239	262
Nevada.....	50	67	65	69	77
Pacific.....	4,268	5,859	5,375	5,787	6,224
Washington.....	742	1,028	905	944	1,022
Oregon.....	470	624	566	603	636
California.....	3,056	4,207	3,904	4,240	4,566

<sup>1</sup> Data presented in this table cover total labor force including armed forces. All data at April seasonal level. Annual average for total United States is about three-fourths of a million higher.

<sup>2</sup> From table 1, column (1).

<sup>3</sup> From table 3, column (1).

<sup>4</sup> All three projections assume that the 1950 labor force of each State will include some "extra" workers who would not be in the labor force on the basis of the prewar patterns of labor-market participation assumed in the "natural" and "normal" projections (table 1). Participation of "extra" workers in each State is assumed to be 15 percent of the wartime extra-worker total (table 3, column 5). All three projections take account of net civilian interstate migration between 1940 and 1945. None of the projections make allowance for migration from foreign countries between 1940 and 1950. Assumptions with respect to interstate migration between 1945 and 1950 are as follows:

*Assumption A.* Whatever new interstate migration takes place between 1945 and 1950 will be offset by return of wartime migrants to their prewar States of residence so that interstate migration in the last half of this decade will have no net effect on the size of the labor force in each State.

*Assumption B.* The net number of workers who move between States during the period 1945-50 will be the same as would be expected on the basis of 1935-40 experience.

*Assumption C.* Net interstate migration of all workers between 1945 and 1950 will be equal to the net interstate migration of civilian workers between 1940 and 1945. Migration of workers on this scale during the second half of the decade could come about with a considerably smaller total population movement than occurred during the first half because wartime civilian migrants included large numbers of servicemen's dependents and a relatively small proportion of men of working age.

## Postwar Work Stoppages Caused by Labor-Management Disputes<sup>1</sup>

DURING no period in the history of the United States have the scope and intensity of labor-management conflicts matched those recorded in the 12 months following VJ-day, August 14, 1945.<sup>2</sup> In this time, the country experienced 4,630 work stoppages, directly involving about 5 million workers and resulting in almost 120 million man-days of idleness. Employment and production, except for temporary setbacks, nevertheless forged ahead to establish new peacetime records. Unions, for the most part, retained their several million new members recruited in the war years and, in the aggregate, kept their organized strength at an estimated 14 to 15 million members.

More than 10 million service men and women were demobilized during this transition period, and most of them were able to find jobs.<sup>3</sup> Thousands of factories retooled to produce the necessities, conveniences, or luxuries of a civilian economy. Other factories, as well as many service trades, which had been curtailed by wartime stringencies, were on the road to prewar status. These developments, however, did not always proceed smoothly. Shortages of key materials and, occasionally, of certain kinds of skilled labor occurred. Many work stoppages, in addition, left their imprint in delayed production of commodities sought by American consumers. The direct effects of certain stoppages, particularly in the basic industries, were severe at times. The indirect effects upon plants and industries not involved in work stoppages were also serious, although statistically impossible of measurement. Both represented the price—or penalty—exact in a shift from a highly controlled, emotionally disciplined “all-out” war economy to a freer, less inhibited way of life.

With the end of the war, workers were faced with the abrupt curtailment of the production of thousands of military items. Many factories cut their scheduled hours from 48 or more a week to 40 and less. Others shut down temporarily or permanently. Wage earners, confronted with serious losses in “take-home” pay, sought to maintain their wartime earnings. Accordingly, union demands soon crystallized into requests for wage-rate increases of 30 percent—the approximate advance workers deemed necessary to preserve their former earnings.

<sup>1</sup> Prepared by the staff of the Labor-Management Disputes Division of the Bureau's Industrial Relations Branch.

<sup>2</sup> Perhaps the most comparable period is 1919. During that year 3,630 work stoppages, involving about 4.2 million workers, were recorded. Data are not available, however, on man-days of idleness.

<sup>3</sup> See *The Labor Force in the First Year of Peace* (p. 669), and *Readjustment of Veterans to Civilian Life* (p. 712), in *Monthly Labor Review*, November 1946; and *Veterans' Return to the Nation's Factories*, p. 924 of this issue.

Many employers, uncertain of the speed with which reconversion could be accomplished and opposed to the continuation of price and other wartime controls, expressed inability to meet the wage proposals of organized labor.

This conflict of economic interests between labor and management was further aggravated by the partial termination of stabilization restraints which had held the upward movement of the cost of living and of rates of pay within moderate bounds during the war years. Application of the Little Steel formula, whereby it was sought to confine increases in wage rates to a level not more than 15 percent above January 1941, prevented the abnormally high rates of pay which characterized some industries in World War I. Moreover, labor's "no-strike" pledge, voluntarily given to the Nation a few days after Pearl Harbor (December 1941), imposed a considerable degree of self-restraint upon union leaders, who steadfastly insisted that strikes called by local union officials or by the rank and file should be terminated immediately.

The end of the fighting phase of the war ended organized labor's no-strike pledge. Workers were free to exercise their traditional right to strike—if necessary—to secure what they considered their just demands. In thousands of cases adjustments were made without work stoppages, unions and management reaching an agreement among themselves through direct negotiation, and often with the assistance of State and Federal Government conciliators.<sup>4</sup> In other instances the struggle reached the picket lines, with workers sacrificing savings and employers foregoing profits. To some, the fight seemed weighted against the wage earners as wartime legislation permitted employers to obtain from the Federal Treasury a refund of portions of their excess profits taxes to offset "losses" occasioned by subnormal earnings arising out of the idleness of their plants. To others, it appeared that the Government, through statements emphasizing the need to maintain a high level of purchasing power to cushion the shocks of reconversion, lent encouragement to the union's wage demands.

On the whole, both labor and employers wanted to be free to bargain across the conference table and, if necessary, to submit to a test of strength. These convictions were expressed by many representatives of labor and of management as the war neared its end and were reflected in Government policy as hostilities ceased. On August 16,

<sup>4</sup> The U. S. Conciliation Service of the Department of Labor aided in the settlement of 3,300 work stoppages during this 12-month period. About two-thirds (over 2,200) of these stoppages in which conciliators participated had begun before the aid of the Conciliation Service had been requested by the parties. More than 90 percent of the disputes in which conciliators entered negotiations at an early stage were settled without any interruption of work.



1945—less than 48 hours after VJ-day—President Truman announced that the National War Labor Board would be terminated soon after the conclusion of a forthcoming national labor-management conference. The Board itself shortly thereafter made it clear that its task had been completed. During the war the Board had weathered numerous crises, but pressure for revision of the Little Steel formula, or outright abandonment of stabilization controls over wages, rose steadily in 1945. On August 18, President Truman issued Executive Order No. 9599 permitting wage increases without specific Government approval, provided the increases would not serve as a basis for higher prices or added cost to Federal agencies purchasing goods or services from contractors. The stage was thus set for a return to "free" collective bargaining within the framework of existing price levels. The War Labor Board indicated it would consider only such controversies as the parties might voluntarily agree to submit to it. Prime reliance, it was stated, would be placed upon a greatly strengthened United States Conciliation Service of the Department of Labor to assist in reconciling differences between labor and management.

### *Significant Stoppages Since VJ-Day*

The work stoppage involving the oil industry which began on September 17, 1945, was the first significant wage controversy of the reconversion period. It reflected most of the wage issues and led to the establishment of the fact-finding procedures which were to characterize a number of subsequent major stoppages. The strike involved about 43,000 refinery workers employed in 20 States. The principal demand of the Oil Workers International Union (CIO) was for 52 hours' pay for 40 hours of work, the equivalent of a 30-percent wage increase. Direct negotiations and Government conciliation were not successful in preventing the stoppage, and arbitration, proposed by the Secretary of Labor, was not accepted by the oil companies, although favored by the union. With a third of the Nation's gasoline supply cut off by the strike and shortages becoming acute, President Truman on October 4 ordered the Navy Department to seize and operate the refineries. Production was resumed shortly thereafter with no change in wage rates or hours of work. Weeks of negotiations between representatives of the union, the industry, and the Government proved fruitless, and on November 27, 1945, the Secretary of Labor appointed a fact-finding panel to review the issues and formulate recommendations for a settlement.

Throughout the autumn of 1945, the number of strikes in effect and the resulting man-days of idleness climbed above the levels of the war years. A few days after the oil stoppage began, the United Clerical,

Technical, and Supervisory Workers Union, a part of District 50 of the United Mine Workers of America (not yet reaffiliated with the American Federation of Labor), struck to obtain recognition and collective-bargaining rights for mine foremen and other supervisory workers in and about bituminous-coal mines. The ensuing stoppage during the next several weeks affected more than 200,000 workers in the industry. The stoppage was terminated October 17, 1945, with a statement by the president of the United Mine Workers that "future efforts to abate this controversy will be resumed at a later, more appropriate date."

Although the stoppage in the coal industry was relatively brief and did not involve the wage issues which characterized many of the major strikes, numerous other stoppages continued for months despite all efforts to reach settlement. Thus, for example, approximately 44,000 workers represented by the Lumber and Sawmill Workers Union, a part of the United Brotherhood of Carpenters and Joiners (AFL), stopped work in the forests and sawmills of the Northwest on September 24, and many continued on strike throughout the winter before a settlement of 15-cents-an-hour increase was reached. The Federation of Glass, Ceramic, and Silica Sand Workers of America (CIO) obtained from two large glass companies a wage increase of 10.7 cents an hour after a stoppage of 102 days. Machinists and shipyard workers in the San Francisco Bay area were idle for 140 days. Among the other large work stoppages from September to late November were those involving building-service employees and longshoremen in New York City, textile workers in New England, and Midwest truckers.

Aware of the growing unrest throughout the country, the President addressed the Nation by radio on October 30 on the subject of reconversion. He set forth the Government's twin objectives of price stability and higher wage rates, and declared that wage increases were necessary "to cushion the shock to our workers, to sustain adequate purchasing power, and to raise the national income." At the same time, Executive Order No. 9651 was issued amending the order of August 18, 1945, by providing that the OPA could consider for price-relief purposes (under existing standards) unapproved wage or salary increases after such increases had been in effect normally for at least 6 months. This statement of national policy was expressed on the eve of the President's National Labor-Management Conference, which brought together on November 5 representatives of organized labor and American industry. Early in the conference, President Murray of the CIO proposed adoption of a resolution urging labor unions and management to engage in "genuine and sincere collective bargaining" on what Mr. Murray described as the "all-important wage issue . . . which has created a very serious crisis for the Nation."

In introducing his resolution, Mr. Murray emphasized that, although wages were not a specific item on the agenda of the conference, current events demonstrated that the solution of procedural matters would not in any way solve the current unrest. The CIO, however, was not supported in its position. Toward the end of the sessions, in late November, the delegates approved a resolution declaring that the question of wages was not before it, but urged that a solution to the wage problem be sought through the processes of collective bargaining.

#### FACT FINDING AND GENERAL MOTORS

The Labor-Management Conference adjourned November 30 without suggesting specific additional machinery which might be utilized to avert or minimize the effects of stoppages such as had occurred during the autumn. President Truman, in a message to the Congress on December 3, therefore urged enactment of legislation which would give him statutory authority to appoint fact-finding boards to consider such disputes which, in the opinion of the Secretary of Labor, would seriously affect the national public interest.

The President's request for fact-finding legislation came about 2 weeks after the beginning of what was to become one of the most prolonged and bitter stoppages of the reconversion period. On November 21, the United Automobile, Aircraft, and Agricultural Implement Workers of America (CIO), following weeks of unsuccessful negotiations, struck all the plants of the General Motors Corp. This stoppage involved approximately 200,000 employees in automotive-parts and assembly plants in 12 States. The union contended that the corporation's ability to pay should be considered a major factor in determining the amount of the wage adjustment and asserted that the full 30-percent increase demanded could be paid without price relief. Company officials, however, insisted that prices and profits had to be excluded from the wage discussions.

The President did not await action by Congress on his proposed fact-finding legislation and on December 14 appointed a board to investigate the UAW-General Motors dispute. The union rejected the President's request to return to work pending findings of the board, but both parties indicated their willingness to present their case to the fact-finding board. On the crucial issue of ability to pay, which was also confronting the board appointed by the Secretary of Labor on November 27 in the controversy involving the petroleum companies, President Truman (on December 20) declared that "ability to pay is always one of the facts relevant to the issue of an increase in wages." The following day the board in the General Motors case announced that the "ability to pay" would be considered as a relevant but not as a sole factor in its recommendations. A week later, representatives



of General Motors withdrew from the hearings, stating that they would refuse to participate further so long as "ability to pay is to be treated as a subject of investigation, fact-finding, and recommendations." The board, nevertheless, proceeded with its investigation and on January 10, 1946, recommended a wage increase of 19½ cents (about 17.5 percent) an hour. Two days later the fact-finding board in the oil case issued its report, recommending an 18-percent wage increase as the basis for settling this dispute.

These fact-finding wage recommendations came on the eve of what was to be the severest period of postwar industrial unrest. Within the next 10 days over a million workers in steel, electrical-manufacturing, meat-packing, and farm-equipment establishments stopped work in support of their demands for higher wages. Workers involved in strikes tripled in number, rising from slightly less than a half million to approximately 1.5 million.

#### EVOLUTION OF A WAGE PATTERN (EARLY 1946)

The largest of these stoppages was in the steel industry, which was brought to a standstill when approximately 750,000 workers, members of the United Steelworkers of America (CIO), stopped work on January 21, 1946, to enforce their demands for a wage increase of \$2 a day. As was true of other large stoppages in which strikes were called only after the break-down of prolonged negotiations, the steel strike followed more than 3 months of intermittent negotiations and a strike poll conducted by the National Labor Relations Board under the provisions of the War Labor Disputes Act on November 28, 1945, in which the workers voted 5 to 1 in favor of a suspension of work. The initial demand of the union for an industry-wide increase of \$2 a day, announced on September 11, 1945, was rejected by the major steel producers, who claimed that existing OPA ceiling prices for steel did not permit the companies to grant any wage increase. Offers of conciliation by the Secretary of Labor were rejected by industry representatives, who insisted that further negotiations would be futile until the OPA authorized an increase in steel prices. On December 31, 1945, 2 weeks before the announced date of the strike, President Truman appointed a three-member board to investigate the wage dispute and to determine whether an increase in steel prices would be justified.

In an effort to forestall a work stoppage, direct negotiations were resumed on January 10. These followed conferences between representatives of the steel industry and Government officials over revision in steel price ceilings. The union scaled down its demand to an increase of 19½ cents an hour—the amount recommended by the fact-finding board in the General Motors case. The United States Steel

Corp., the largest employer in the industry, offered an increase of 15 cents an hour provided price ceilings on steel were revised upward by the OPA. At this juncture, President Truman invited union and industry negotiators to the White House, meanwhile obtaining the union's consent to a 1-week postponement of the strike. On January 17, after receiving an informal report from his steel fact-finding board, the President proposed a wage increase of 18½ cents per hour as the basis of settlement. This proposal was accepted by the union but was rejected by spokesmen for the steel industry. The strike began on January 21, 1946. For the following 3 weeks both parties held their ground despite efforts of the Government to find an acceptable compromise. Furnaces were banked and steel output, which had been running at 80 to 85 percent of capacity, dropped to about 6 percent. Other industries, dependent upon steel, were forced to curtail or suspend operations.

The cumulative effects of the stoppages and unsettled disputes involving a number of basic industries became so great that by mid-February the Government was forced to revise its wage-price stabilization regulations. The President on February 14, 1946, issued Executive Order No. 9697, which permitted the National Wage Stabilization Board—the successor to the former National War Labor Board—to approve any wage or salary adjustment consistent with the general pattern of such adjustments established in the industry or local labor-market area between August 18, 1945, and February 14, 1946. Prior approval was also given to increases made in accordance with a governmental recommendation in a wage controversy announced before February 14, 1946.

The following day (February 15) the United Steelworkers of America and the United States Steel Corp. signed an agreement accepting the President's previously proposed wage increase of 18½ cents an hour. The steel industry was also granted price relief, averaging \$5 per ton.

Settlement of the steel-wage controversy, together with revision of the Government's wage-stabilization policy, facilitated the adjustment of many disputes and stoppages then in progress. The specific provision in the President's February 14 Executive order approving (from a stabilization angle) recommendations of fact-finding or arbitration boards which had reported prior to the issuance of the order gave an added measure of "solidity" to the conclusions of these boards. In the bitter controversy between General Motors and the auto workers' union, UAW leaders, supported by the rank and file, continued to insist upon the full 19½ cents recommended by the fact-finding board on January 10, despite a company proposal to settle for 18½ cents. It was not until March 13 that the UAW compromised on the 18½-cent settlement. Although the board in the oil wage

dispute had recommended an 18-percent wage raise on January 12, it was late February when most of the companies concluded agreements with the Oil Workers International Union (CIO) and the Government returned the seized refineries to private operators. In the meat-packing dispute, approximately three-fourths of the industry was brought under the Government's seizure order of January 24, which paved the way for the return of 125,000 workers (members of AFL and CIO unions) to their jobs a few days later. On February 7, the fact-finding board appointed by the Secretary of Labor in this controversy recommended a wage increase of 16 cents per hour. This increase was approved by the National Wage Stabilization Board on February 26, concurrently with authorization, by the Director of Economic Stabilization, of an increase in meat prices.

That the steel formula did not provide an easy and quick solution in all wage controversies was demonstrated in the dispute of electrical workers with the Westinghouse Electric & Manufacturing Co. About 180,000 members of the United Electrical, Radio, and Machine Workers of America (CIO) stopped work on January 15 at about 75 plants of the General Electric Co., the electrical division of the General Motors Corp., and the Westinghouse Electric & Manufacturing Co. to enforce their demand for an increase of \$2 a day. On February 9, the UERMWA accepted the offer of General Motors to settle for 18½ cents an hour. It was not until March 14, however, that the union and General Electric agreed on a basic 18½-cent increase, and it was 2 months later (May 10) when the union and Westinghouse Electric & Manufacturing Co. agreed to an 18-cent increase with establishment of a fund of 1 cent per hour per employee to adjust differentials between men and women. In the case of the United Farm Equipment and Metal Workers of America (CIO), 25,000 workers became idle on January 21 in plants of the International Harvester Co. in Illinois, Indiana, Iowa, and New York. An agreement, providing for a wage increase of 18 cents an hour, was reached only after 86 days. Again, the strike of the International Union of Mine, Mill, and Smelter Workers (CIO) against the American Smelting and Refining Co., which started on February 25, ended in mid-June when the 18½-cent wage increase recommended by a fact-finding board appointed by the Secretary of Labor was accepted by both parties to the dispute.

The wave of large-scale stoppages which began in late November 1945 with the UAW-General Motors dispute, reached its crest in February, when the direct loss of about 23 million man-days was recorded as caused by labor-management disputes. This represented 4.2 percent of the month's estimated working time. The cumulative, indirect effects of the stoppages occurring during the period were even more severe, although not subject to measurement. Total



production, as reflected by the index of the Federal Reserve Board, was about 10 percent lower in February 1946 than in the preceding September. Production indexes of specific commodities, such as steel ingots, refined copper, lumber, washing machines, and refrigerators, showed even more drastic declines.

#### COAL AND TRANSPORTATION CONTROVERSIES

Although the number of stoppages increased in March, and again in April, fewer workers were involved, and there was a substantial drop in time lost from the record-breaking peak of February. Of the large strikes which occurred in the spring, the most significant were those involving bituminous-coal miners and railroad engineers and trainmen. In soft coal, failure of the coal operators and the United Mine Workers of America (AFL) to negotiate a new agreement prior to the expiration of the existing contract, on March 31, 1946, resulted in an industry-wide stoppage, which continued from April 1 through May 29 except for a 12-day truce (May 13-25), during which the majority of the 340,000 miners worked.

At the outset of the coal controversy, the UMWA filed the 30-day strike notice legally required under the War Labor Disputes Act and concentrated its demand upon the establishment of a health and welfare fund to be financed by the industry and administered by the union. Negotiations proceeded slowly during March and April, with the effects of the coal strike on the Nation's reconversion program becoming increasingly serious. A month after the strike started, President Truman released a report of the Office of War Mobilization and Reconversion in which the coal dispute was termed a "national disaster." When both the union and the operators rejected Mr. Truman's proposal to arbitrate, the President, on May 21, ordered Government seizure of the mines and their operation under the direction of the Secretary of the Interior. Despite this step, most miners stayed away from work and did not return until after May 29, when an agreement, to be effective during Federal operation of the mines, was signed by the Secretary of the Interior, Julius A. Krug, and John L. Lewis, president of the United Mine Workers. The principal terms provided for a wage increase of 18½ cents an hour and a health and welfare fund to be financed by the levy of 5 cents per ton of coal produced for use or sale, the fund to be administered by three trustees—one selected by the union, one by the coal mines administrator, and the third by the other two. The settlement also served as the basis for terminating the anthracite controversy, which extended from May 31 to June 7. In the case of the anthracite fund, however, it was provided that two trustees would be selected by the union and the third, by the operators.

Shortly before the Government seized the bituminous-coal mines, the railroad-wage controversies reached their climax. Early in 1946,<sup>1</sup> two groups of railroad unions, one representing firemen, conductors, and switchmen, and the other, 15 "nonoperating unions" (including shop-craft, maintenance-of-way, clerical, and other employees), agreed to submit their wage issues to arbitration. Two other unions, the Brotherhood of Locomotive Engineers (Ind.) and the Brotherhood of Railroad Trainmen (Ind.), declined to arbitrate. Thereupon, after a strike vote had been taken, the President, in early March, appointed a fact-finding board to consider the controversy of these two unions with the railroads. The two arbitration boards, on April 3, awarded the groups of railroad employees involved in the cases an increase of 16 cents an hour. On April 18, the fact-finding board in the engineers' and trainmen's case recommended a like amount. This board also had before it many involved proposals for changes in working rules submitted by both the unions and the railroads. Most of these proposals were denied by the board. None of the three groups of unions was satisfied with the wage award. The Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen also felt that the recommended revisions in working rules were inadequate; these two unions, therefore, laid plans to strike at the expiration of the 30-day waiting period provided by the Railway Labor Act.

Further negotiations under White House auspices failed, and on May 17 the President ordered seizure of the railroads and their operation under the direction of the Office of Defense Transportation. Shortly before the strike was scheduled to begin on May 18, the leaders of the two brotherhoods complied with the President's request to postpone the threatened walk-out for 5 days. Negotiations were resumed in Washington involving all three groups of railroad unions. On May 22, the carriers and all the rail unions except the engineers and the trainmen accepted a compromise settlement for an 18½-cent-an-hour wage increase and a 1-year moratorium on changes in rules. The engineers and trainmen, however, rejected this settlement and at 4 p. m., May 23, withdrew from service, causing a complete Nation-wide tie-up of rail transportation, the first in the long history of the industry. On the night of May 24, the President spoke to the country by radio and requested the men to return to service. The next day he addressed a joint session of Congress seeking emergency legislation which would give him power designed to prevent, for the immediate future, strikes which might have widespread effects on the Nation's economy. Almost simultaneously with his appearance before Congress, union officials signed an agreement accepting the President's proposal of May 22, and ordered their members to return to their jobs. Service was thus restored after the 2-day stoppage.

<sup>1</sup> See Railway Wage Changes, 1941-46, in *Monthly Labor Review*, September 1946 (p. 335).

The House of Representatives immediately passed the emergency bill the President had requested. The Senate, however, considered various amendments and adopted a modified bill. No action was taken in reconciling the two versions of the President's proposal. The sentiment of Congress was such, nevertheless, that the bill introduced by Representative Case of South Dakota, which had been before Congress during the spring and vigorously opposed by labor, was revised and approved by both Houses. President Truman, vetoed the Case bill on June 11, explaining that permanent legislation should not be enacted hastily and should be preceded by a careful study of the causes of industrial disputes.

The railroad controversy was the last of the stoppages involving over 100,000 workers which occurred during the period under survey. Another threatened transportation strike, involving nearly 200,000 members of the Committee of Maritime Unity, composed of six CIO unions and one unaffiliated union, was averted by a settlement made less than an hour before the strike deadline of June 15. After negotiations had come to an impasse in this dispute, the Secretary of Labor summoned representatives of the unions and ship operators to meet in Washington on May 29 for further conferences under his direction. The War Shipping Administration (the Government agency which owned many of the vessels) subsequently entered the negotiations and, just prior to the scheduled strike date, directed all WSA general agents or their representatives to accept proposals calling for a wage increase of \$17.50 a month, certain reductions in basic hours, and arbitration of other issues. These terms formed the basis of the agreements which were adopted by the seagoing unions and their employers. The longshoremen's union, in turn, accepted the report of a fact-finding board which had recommended a wage increase of 22 cents an hour for West Coast longshoremen.

By the end of June 1946 the round of "reconversion" strikes, which were predominantly over the wage issue, had come to a close. The final month-and-a-half of the first postwar year was a period of price uncertainty characterized by numerous but relatively small disputes. During the year as a whole, the national wage-price policy was modified first in late October 1945 and then more drastically in mid-February 1946. Fact-finding boards as a substitute for the National War Labor Board were found to be not always entirely successful, and Government seizure had to be resorted to in certain cases as a method of resolving some conflicts. Thus, during the immediate postwar period, the early hopes for a rapid return to free collective bargaining had not been realized. The Government, which had desired to remain in the background and gradually relinquish its wartime controls, had been forced to take an increasingly active part in the settlement of labor-management disputes.



*Statistical Summary*<sup>a</sup>

Some indication of the scope and severity of the work stoppages that began during the first 12 months after VJ-day can be obtained by comparison with two preceding periods—the 44 months from Pearl Harbor to the surrender of Japan, and the period 1935–39 (used as a base for many current statistical series). During the year following VJ-day, an average of 386 stoppages occurred each month as against 333 per month for the war period and 239 per month for 1935–39. On the basis of workers involved, there were, on the average, 415,000 in stoppages beginning each month in the first postwar year. This compares with monthly averages of 152,000 workers during the war and approximately 94,000 for 1935–39. The greatest divergence from earlier periods was, however, in the idleness which resulted from the stoppages. Between VJ-day and August 14, 1946, the amount of lost time, measured in terms of a monthly average for the period, amounted to almost 10 million man-days per month, as against a wartime figure of 0.8 million man-days per month and 1.4 million man-days per month over the 5 years 1935–39.

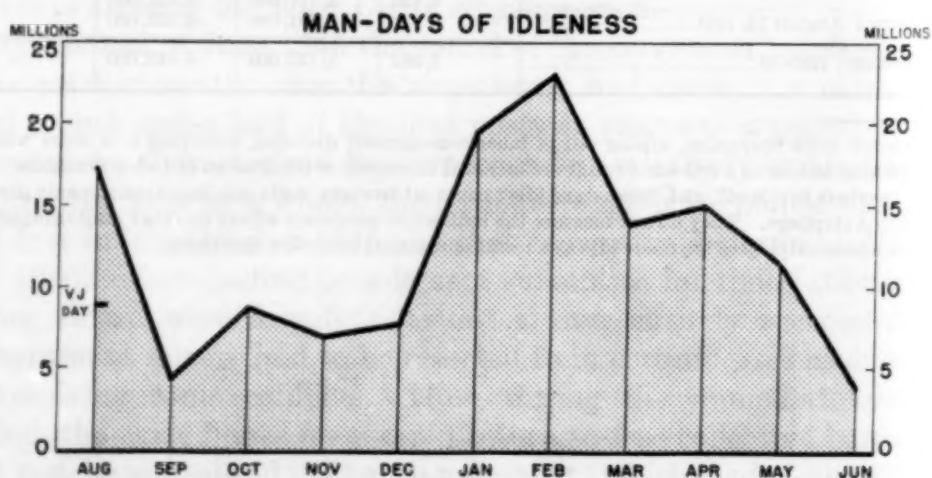
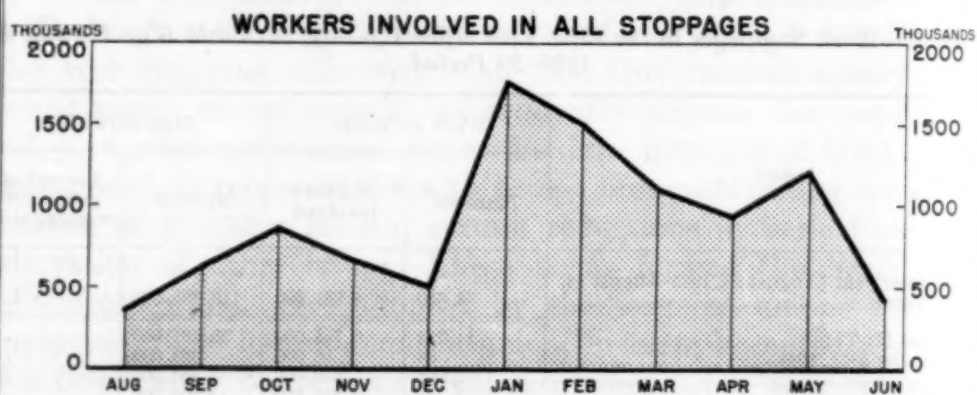
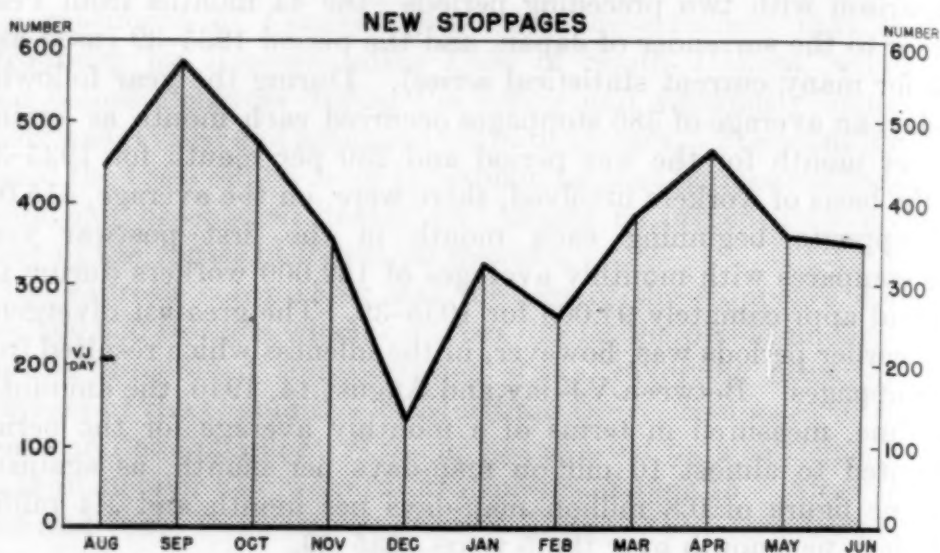
TABLE 1.—*Work Stoppages in the First Year After VJ-Day, in World War II, and in 1935–39 Period*

Period	Work stoppages		Man-days idle	
	Number	Workers involved	Number	Percent of estimated working time
First postwar year (August 15, 1945–August 14, 1946): Total.....	4,630	4,981,000	119,785,000	1.62
World War II: Total.....	14,731	6,744,000	36,301,000	.11
December 8–31, 1941.....	84	16,000	303,000	.06
1942.....	2,968	840,000	4,183,000	.05
1943.....	3,752	1,981,000	13,501,000	.15
1944.....	4,956	2,116,000	8,721,000	.09
January 1–August 14, 1945.....	2,971	1,791,000	9,593,000	.17
Yearly average, 1935–39.....	2,862	1,125,000	16,949,000	.27

<sup>a</sup> All known work stoppages, arising out of labor-management disputes, involving 6 or more workers and continuing as long as a full day or shift are included in reports of the Bureau of Labor Statistics. Figures on "workers involved" and "man-days idle" cover all workers made idle in establishments directly involved in a stoppage. They do not measure the indirect or secondary effects on other establishments or industries whose employees are made idle as a result of material or service shortages.

# WORK STOPPAGES

AUGUST 1945 TO JUNE 1946



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

The above averages for the postwar period were, of course, greatly affected by the relatively large number of stoppages involving 10,000 or more workers. During the year following VJ-day, 42 such stoppages took place. These large strikes involved nearly 3,000,000 workers—substantially more than were involved in all stoppages in 1944, the peak war year. They resulted in over 85,000,000 man-days of idleness, or about 70 percent of the total idleness of the period. Eight stoppages involved as many as 100,000 to over 700,000 workers each. Two of these were in coal mining; the others were in automobile manufacturing, electrical machinery, meat-packing, communications, railroad transportation, and steel.

All of the 42 large stoppages occurred in the 10½ months from VJ-day to June 1946, during which time Government wage policies were adjusted and a general pattern of wage increases established. In this period there were, including the 42 disputes mentioned above, 436 work stoppages which involved as many as 1,000 workers each. These involved nearly 4 million workers and accounted for 104 million man-days of idleness—slightly more than 90 percent of the total lost time recorded for the period August 14, 1945, to June 30, 1946.

TABLE 2.—*Work Stoppages From VJ-Day to June 30, 1946, by Size of Stoppage*

Size of stoppage	Number of stoppages	Workers involved		Man-days idle	
		Number	Percent of total	Number	Percent of total
Total.....	3,924	4,681,000	100.0	114,932,000	100.0
Under 500.....	3,124	474,000	10.1	5,061,000	4.4
500 and under 1,000.....	364	249,000	5.3	5,854,000	5.1
1,000 and under 5,000.....	351	683,000	14.6	13,263,000	11.5
5,000 and under 10,000.....	43	281,000	6.0	5,353,000	4.7
10,000 and over.....	42	2,994,000	64.0	85,401,000	74.3

Unions affiliated with the CIO participated in slightly more than half (230) of the work stoppages of 1,000 or more workers occurring between VJ-day and June 1946, and accounted for almost two-thirds of all the idleness; those affiliated with the AFL were involved in about one-third of these work stoppages<sup>7</sup> and accounted for 27 percent of the total man-days of direct idleness.

<sup>7</sup> Data referring to AFL work stoppages include disputes involving the United Mine Workers of America for the period following the union's reaffiliation with the AFL in January 1946, but exclude the UMWA work stoppages from AFL totals for the earlier period covered by the survey when the miners were not affiliated with either AFL or CIO.



TABLE 3.—*Work Stoppages of 1,000 or More Workers, VJ-Day to June 30, 1946, by Affiliation of Labor Organizations Involved*

Labor organization involved	Number of stoppages	Workers involved		Man-days idle	
		Number	Percent of total	Number	Percent of total
Total.....	436	3,958,000	100.0	104,016,000	100.0
American Federation of Labor <sup>1</sup> .....	142	888,600	22.4	28,069,000	27.0
Congress of Industrial Organizations.....	230	1,987,000	50.2	66,878,000	64.3
Unaffiliated railroad brotherhoods.....	3	361,300	9.1	775,000	.7
Unaffiliated unions (other) <sup>1</sup> .....	50	545,300	13.8	7,095,000	6.8
Other—miscellaneous <sup>2</sup> .....	11	175,980	4.5	1,199,000	1.2

<sup>1</sup> Data referring to AFL work stoppages include disputes involving the United Mine Workers of America for the period following the union's reaffiliation with the AFL in January 1946 but exclude UMW A work stoppages from AFL totals for the earlier period covered by the survey when the miners were not affiliated with either AFL or CIO.

<sup>2</sup> This category includes stoppages in which two or more unions of different affiliation were involved, as well as stoppages which were confined to a single-firm union and to those in which no union was included.

Wages were an important issue and, in most cases, the major controversial factor in substantially over one-half of the 436 larger stoppages. Over 77 percent of all workers involved and about 86 percent of the man-days lost in the strikes of 1,000 or more workers centered around wage issues. By contrast, relatively few stoppages had as their major issue questions of union recognition, "security," and other organizational problems. Still fewer stoppages (only 19) had as their central issue matters pertaining to labor rivalry either within a particular union or between two unions, such as jurisdictional controversies (table 4).

On an industry basis, about 3 out of every 4 work stoppages involving 1,000 or more workers took place in manufacturing establishments. Among nonmanufacturing industries, the most strikes and resulting lost time between VJ-day and June 30, 1946, occurred in mining and in the transportation-communication field.

TABLE 4.—*Work Stoppages of 1,000 or More Workers, VJ-Day to June 30, 1946, by Major Issues*

Major issue	Number of stoppages	Workers involved		Man-days idle	
		Number	Percent of total	Number	Percent of total
All issues.....	436	3,958,000	100.0	104,016,000	100.0
Wages and hours.....	242	3,064,000	77.4	89,346,000	85.9
Wage increase.....	158	2,338,600	59.1	83,526,000	80.3
Other <sup>1</sup> .....	84	725,800	18.3	5,820,000	5.6
Union organization, wages, and hours.....	50	195,900	4.9	7,403,000	7.1
Recognition, wages, and/or hours.....	15	35,500	.9	829,900	.8
Other.....	35	160,400	4.0	6,573,000	6.3
Union organization.....	27	277,400	7.0	3,958,000	3.8
Recognition.....	8	223,000	5.6	3,388,000	3.3
Other.....	19	54,400	1.4	570,400	.5
Other working conditions.....	98	319,200	8.1	2,906,000	2.8
Inter- or intra-union matters.....	19	101,000	2.6	403,000	.4

<sup>1</sup> Includes stoppages involving adjustments of piece rates, incentive rates, wage classifications for new and changed operations, retroactive pay, holiday and vacation pay, payment for travel time, etc.

TABLE 5.—Work Stoppages of 10,000 or More Workers in the First Year After V-J-Day

Beginning date	Approximate duration (calendar days)	Establishment(s) and location	Union(s) involved	Major terms of settlement	Approximate number of workers involved
1945					
Sept. 1	6	Consolidated Steel Corp., Orange, Tex.	AFL craft unions	Work resumed pending further company-union negotiations	11,000
Sept. 3	1	Goodyear Tire & Rubber Co., Akron, Ohio.	United Rubber Workers of America (CIO).	Grievance adjusted by discharged employees' return to work after a week's lay-off without pay.	16,000
Sept. 4	22	B. F. Goodrich Co., Akron, Ohio	Foreman's Association of America (Ind.).	No change in company's position that it would not recognize a foreman's union as a bargaining agency.	14,000
Sept. 10	19	Westinghouse Electric Corp., Maryland, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania.	Federation of Westinghouse Independent Salariat Unions (Ind.).	Stoppage arose over protest against War Labor Board's denial of bonus plan for salaried workers. Employees returned to work upon assurance that War Labor Board would review its decision. Board later reaffirmed its denial.	40,000
Sept. 17	20	Oil refineries, 20 States.	Oil Workers International Union (CIO).	Wage increase of 18 percent	43,000
Sept. 21	30	Bituminous-coal mines, 8 States.	United Clerical, Technical, and Supervisory Employees, District 50, United Mine Workers of America (Ind.).	Request for union recognition of supervisory workers temporarily abandoned.	120,000
Sept. 24	6	Midtown Realty Owners, New York City.	Building Service Employees International Union (AFL).		
Sept. 24	4	New York Shipbuilding Co., Camden, N. J.	Industrial Union of Marine and Shipbuilding Workers of America (CIO).	Protest against War Labor Board modification of recommendations of its panel board resolved by agreement to arbitrate. Workers subsequently obtained a reduction in their work-week from 48 to 40 hours with no loss in take-home pay.	15,000
Sept. 24	(?)	Northwest lumber industry, California, Idaho, Montana, Oregon, and Washington.	Lumber and Sawmill Workers Union (AFL).	Grievance arising over discharge of 13 employees for alleged "loading." Settled by reinstatement of 5 workers and joint union-company review of cases of remaining employees.	17,000
Sept. 27	13	Textile printing companies, Connecticut, New Jersey, New York, Pennsylvania, and Rhode Island.	Federation of Dyers, Finishers, Printers, and Bleachers of America (CIO).	Wage increase of 15 cents per hour	44,000
Oct. 1	3	Consolidated Steel Corp., Los Angeles, Calif.	International Union of Operating Engineers (AFL) and International Association of Machinists (AFL).	Wage increase of 10 cents per hour for men and 5 cents per hour for women.	16,000
				Jurisdictional dispute. Work resumed pending further negotiations between representatives of unions concerned.	10,000

<sup>1</sup> About 45,000 workers were idle by September 30. The remainder became idle during October.

<sup>2</sup> Settlements reached with a few companies prior to December 1945. Majority of agreements signed by late December, with most of the remaining settlements occurring at some time in the subsequent 3 months.

TABLE 5.—*Work Stoppages of 10,000 or More Workers in the First Year After VJ-Day—Continued*

Beginning date	Approximate duration (calendar days)	Establishment(s) and location	Union(s) involved	Major terms of settlement	Approximate number of workers involved
1945					
Oct. 1.....	6	General Motors Corp., Frigidaire Division, Dayton, Ohio.	United Electrical, Radio and Machine Workers of America (CIO).	Work resumed upon agreement that suspension of 4 workers would be considered under established grievance procedure and, if necessary, be referred to an impartial umpire.	12,000
Oct. 1.....	19	New York Shipping Association..... New York City; Hoboken and Newark, N. J.	International Longshoremen's Association (AFL).	Men returned to work pending arbitration of issues. Subsequent award granted 20-percent wage increase, 40-hour work week, 8-hour day, time and one-half overtime. Union's request for limitation on size of "sling load" denied.	30,000
Oct. 16.....	102	Libbey-Owens-Ford Glass Co. and Pittsburgh Plate Glass Co. 7 States.	Federation of Glass, Ceramic, and Silica Sand Workers of America (CIO).	Wage increase of 10.7 cents per hour.....	13,000
Oct. 29.....	2	Prestone Tire & Rubber Co..... Akron, Ohio.	United Rubber Workers of America (CIO).	Demand of maintenance employees for a 23-cents-per-hour wage increase refused; men returned to work.	15,000
Oct. 29.....	140	Machine shops, shipyards, etc. San Francisco Bay area, Calif.	International Association of Machinists (AFL) and United Steelworkers of America (CIO).	Wage increase of 17½ percent obtained by United Steelworkers (CIO). Increase of 18 percent obtained by machine shop machinists (IAM). Shipyard machinists (IAM) obtained an 18-cents-per-hour wage increase.	37,000
Nov. 1.....	133	Textile mills..... Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island.	Textile Workers Union of America (CIO).	Wage increase of 8 cents per hour, 65-cent minimum; third shift premium of 7 cents per hour and guaranteed base rate to piecework employees. Settlement also provided vacation with pay, added insurance benefits, maintenance-of-membership and union-security provisions.	18,000
Nov. 19.....	2	Goodyear Tire & Rubber Co..... Akron, Ohio.	United Rubber Workers of America (CIO).	Maintenance employees had protested ruling of impartial umpire that company could schedule 8-hour shifts where needed. Men returned to work on order of union officials.	15,000
Nov. 12.....	81	Midwest Truck Operators Association. 20 States.	International Brotherhood of Teamsters, Chauffeurs, Warehousemen, and Helpers of America (AFL).	Wage increases averaging 15 to 18 percent.....	10,000
Nov. 15.....	1	Leather manufacturers..... 15 States.	International Fur and Leather Workers Union (CIO).	1-day demonstration to emphasize demand for a 30-percent wage increase. No immediate wage changes.	25,000
Nov. 19.....	6	Illinois Bell Telephone Co..... Illinois and Indiana.	Illinois Telephone Traffic Union (Ind.).	Wage increase of \$4 per week retroactive to May 9, 1945. Additional \$2 per week to be effective February 1, 1946. Maximum of salary brackets to be reached in 8 years, instead of 9 years.	14,000
Nov. 21.....	(9)	General Motors Corp..... 12 States.	United Automobile, Aircraft, and Agricultural Implement Workers of America (CIO).	Wage increase of 18¼ cents per hour.....	200,000
Dec. 3.....	1	Steamship and stevedoring companies, Pacific, Atlantic, and Gulf ports.	Maritime unions (CIO).....	1-day demonstration in protest against "delay" in returning servicemen from overseas.	13,000

1946	65	Western Electric Co.....	Western Electric Employees Association (affiliated with National Union of Marine and Shipbuilding Workers of America)	Wage increase of 18.2 percent. Retroactive for 5 weeks prior to March 9.	24,000
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# POSTWAR WORK STOPPAGES

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1946 Jan. 3	65	Western Electric Co. New Jersey and New York.	Western Electric Employees Association (affiliated with National Federation of Telephone Workers, Ind.).	Wage increase of 18.2 percent. Retroactive for 5 weeks prior to March 9.	21,000
Jan. 9	7	Western Electric Co. Nation-wide.	Association of Communication Equipment Workers (affiliated with National Federation of Telephone Workers, Ind.).	Equipment workers returned to work under union orders pending formal strike action by National Federation of Telephone Workers. March 9, wage increase of 5 cents per hour retroactive to April 21, 1945, plus a 16.4-percent wage increase retroactive to February 2, 1946.	142,000
Jan. 15	(9)	Electrical workers. General Motors, General Electric, and Westinghouse plants.	United Electrical, Radio, and Machine Workers of America (CIO).	Wage increases of 18½ cents per hour for employees of General Motors and General Electric. Westinghouse workers obtained 18-cent increase and 1-cent fund to adjust differentials between men and women.	180,000
Jan. 16	19	Packaginghouse workers. Several States.	United Packaginghouse Workers of America (CIO) and Amalgamated Meat Cutters and Butcher Workmen of North America (AFL).	Wage increase of 16 cents per hour.	125,000
Jan. 21	(9)	Steelworkers. Nation-wide.	United Steelworkers of America (CIO).	Wage increase of 18¼ cents per hour.	750,000
Jan. 21	86	International Harvester Co. Illinois, Indiana, Iowa, and New York.	United Farm Equipment and Metal Workers of America (CIO).	Wage increase of 18 cents per hour.	25,000
Jan. 29	29	Caterpillar Tractor Co. Peoria, Ill.	do.	Wage increase of 15 cents an hour for employees earning \$1 an hour or less, and 15 percent for those earning more than \$1 an hour. Maintenance-of-membership provision established with 15-day escape clause.	17,000
Feb. 4	(9)	American Brass Co. and Chase Brass Co. Connecticut and New York.	International Union of Mine, Mill, and Smelter Workers (CIO).	Wage increase of 18½ cents per hour, with cash settlement of one-half million-dollar compensatory bonus for wartime swing-shift workers of American Brass Co.	16,000
Feb. 11	2	Philadelphia Transit Co.	Transport Workers Union of America (CIO).	Wage increase of 12 cents per hour and strengthened maintenance-of-membership clause (preferential shop).	10,000
Apr. 1	59	Bituminous-coal mines. Industry-wide.	United Mine Workers of America (AFL after Jan. 1946).	Basic wage increase of 18½ cents per hour. Establishment of welfare fund based upon 5-cents-per-ton levy on coal produced for use or sale.	340,000
Apr. 5	6	Port of Philadelphia.	United Harbor Workers (District 36, United Mine Workers of America, AFL). Stoppage supported by CIO and AFL unions.	United Harbor Workers (AFL) withdrew their pickets. Symptathy strikers returned to work.	18,000
Apr. 30	(7)	Allis-Chalmers. Massachusetts, Illinois, and Wisconsin (4 plants).	United Automobile Workers and Farm Equipment and Metal Workers (CIO).	Dispute not settled by August 14, 1946.	21,000

\* Agreement reached on March 13, 1946; ratification by local unions, together with plant-production problems, delayed reopening of most plants until late in the month. A few plants continued idle into April.

\* General Motors Corp. (Electrical Division) settled on February 9. General Electric Co. on March 14, and Westinghouse Electric & Manufacturing Co. on May 10.

\* Settlement on February 15 with U. S. Steel Corp., followed by agreements with other large companies within 4 days, resulted in the return to work of approximately 450,000 employees. Virtually all the remaining 300,000 workers went back to their jobs at various dates during the next 2 months as additional settlements were reached.

\* Chase Brass Co. settled on April 6 and American Brass Co. on May 19.

\* Still in effect August 14, 1946.

\* Stoppages also occurred in the middle of March in three other plants (Indiana, Pennsylvania, and Ohio) involving approximately 4,000 workers.

TABLE 5.—*Work Stoppages of 10,000 or More Workers in the First Year After VJ-Day—Continued*

Beginning date	Approximate duration (calendar days)	Establishment(s) and location	Union(s) involved	Major terms of settlement	Approximate number of workers involved
1946					
May 3.....	1	Briggs Manufacturing Co., Detroit, Mich.	United Automobile, Aircraft, and Agricultural Implement Workers of America (CIO).	Work resumed following a 1-day stoppage in protest against the discharge of 4 employees over production-standard issue.	11,000
May 23.....	2	Railroad industry..... Nation-wide.	Brotherhood of Locomotive Engineers and Brotherhood of Railroad Trainmen (Ind.).	Wage increase of 13½ cents per hour.....	350,000
May 28.....	1	City of Rochester, N. Y.....	AFL and CIO unions: General sympathy strike.	Statement by city officials that municipal employees might join any union of their choice which did not claim the right to strike against the public.	20,000
May 31.....	8	Anthracite mines..... Industry-wide.	United Mine Workers of America (AFL).	Wage increase of 18½ cents per hour and establishment of welfare fund based upon 5-cents-per-ton levy on coal produced for use or sale.	75,000
June 3.....	3	Association of General Contractors of America, Cincinnati, Ohio.	International Hod Carriers', Building, and Common Laborers' Union of America (AFL).	Wage increase of 15 cents per hour.....	10,000
June 10.....	5	Monongahela Connecting Railroad Co., Pittsburgh, Pa.	Brotherhood of Railroad Trainmen (Ind.).	Employees returned to work following Government seizure of the railroad.	10,000
June 27.....	5	Railway Express Co., New York City; Hudson County, N. J.	Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees (AFL).	Rules governing seniority and work assignments revised.....	12,000

\* Includes workers in Jones &amp; Laughlin Steel Corp. plant served by the railroad.

*Work of the United States Conciliation Service Since VJ-Day*<sup>8</sup>

Almost simultaneously with the firing of the last gun in Japan, the bulk of mediating labor-management disputes fell upon the Conciliation Service of the U. S. Department of Labor. For about 3 years prior to VJ-day the overwhelming majority of serious unsettled disputes between management and labor were resolved by Government directives. After January 1, 1946, no agency existed which could order changes in contracts or adjudicate disputes over grievances, and although the authority to do so existed prior to that date it was not in fact used between August 17 and December 31, 1945. Since VJ-day, therefore, the settlement of all disputes has in the final analysis required mutual agreement between the parties affected.

The emphasis upon direct negotiations, with a minimum of Federal control over labor controversies, resulted in a tremendous increase in the obligation of the U. S. Conciliation Service to secure final settlement of conflicts on a voluntary basis, through collective bargaining between management and labor. The settlement of cases also became more difficult. During the war, increases in wages were limited by the various stabilization criteria established by the National War Labor Board. These limitations also served as standards for both management and labor to be used in wage negotiations. Moreover, by using a uniform procedure in handling disputes over vacations with pay, night shift premiums, union security, and similar issues, the War Labor Board established standards which in effect set the limitations of collective bargaining on so-called "fringe" adjustments. With the end of WLB these standards were in great part entirely abandoned.

Thus, the task of the Conciliation Service was greatly complicated. Voluntary mediation solutions, being far more difficult to evolve, require not only greater skill on the part of commissioners of conciliation but also more time and greater energy. Previously such solutions were formulated by the National War Labor Board and enforced under the wartime powers of the President. Now, the Conciliation Service has to resort to settlements by suggestions which may or may not readily be accepted by the parties.

Since VJ-day the two major goals of the U. S. Conciliation Service have been to prevent industrial conflict and to restore peace after a work stoppage has begun. The success of the Conciliation Service in reducing the area of industrial conflict is attested by the number of cases handled and closed by conciliators during the 12 months immediately following VJ-day. During that period Federal conciliators aided in the peaceful settlement of more than 12,500 industrial disputes or 91 percent of the labor-management disputes in which

<sup>8</sup> Prepared by the U. S. Conciliation Service of the Department of Labor.



conciliators entered into negotiations before a work stoppage had actually occurred.

Unfortunately, however, the records of the Conciliation Service also indicate that two out of every three work stoppages had already begun before Federal mediation was requested by the parties. The future effectiveness of voluntary mediation in aiding free collective bargaining will, therefore, largely depend on the degree to which representatives of management and of labor voluntarily assume the responsibility of invoking the aid of the U. S. Conciliation Service before their negotiations reach the stage of complete collapse.

TABLE 6.—*Work Stoppages and Other Labor-Management Disputes Handled by U. S. Conciliation Service, VJ-Day to August 15, 1946*

Month	Work stoppages		Other labor-management disputes	
	Number of cases	Workers involved	Number of cases	Workers involved
Total: August 14, 1945-August 15, 1946.....	3, 360	2, 660, 200	12, 581	5, 166, 200
August 14-31, 1945.....	139	78, 500	613	333, 300
September 1945.....	231	70, 000	941	422, 900
October 1945.....	358	272, 700	1, 278	463, 400
November 1945.....	256	151, 000	1, 038	349, 400
December 1945.....	186	118, 600	1, 000	419, 900
January 1946.....	174	125, 800	911	408, 200
February 1946.....	222	206, 600	850	328, 400
March 1946.....	278	751, 800	859	681, 000
April 1946.....	355	212, 000	1, 152	430, 400
May 1946.....	324	118, 000	1, 409	476, 900
June 1946.....	313	200, 000	1, 095	359, 900
July 1946.....	368	115, 100	972	328, 000
August 1-15, 1946.....	156	240, 100	463	164, 500

## Productivity Changes Since 1939<sup>1</sup>

PRODUCTIVITY—the relationship between production and labor input—is one of the most significant factors affecting living standards, the relationship between changes in wages, costs, and prices, and employment levels. During the prewar period there were substantial gains in output per man-hour from year to year throughout the economy, and the present and future course of productivity is a matter of importance to all.

In times of depression, productivity gains have been viewed as a serious threat to employment; in times of prosperity, as the promise of a better life. Actually, advances in productivity are neither a guaranty of increasing living standards nor a harbinger of unemployment, but represent increases in the Nation's production potential. If markets for an expanding output are not developed as productivity rises, unemployment may result and the potential rise in production and consumption may not be realized. However, if employment is maintained, gains in productive efficiency make possible greater consumption of goods and services or greater leisure.

During the Second World War, productivity trends varied widely from industry to industry. In the production of war equipment, there were huge gains in productive efficiency as mass-production methods were adapted to the manufacture of munitions and as new techniques and equipment grew out of intensive research. In the industries manufacturing goods mainly for civilian use, there was little significant change in productivity after 1941, primarily because the normal flow of new and improved equipment into these industries was interrupted by the war. In the mining industries, output per man-hour continued to rise at approximately the prewar pace, despite many wartime difficulties; in railroad transportation, electric light and power, and agriculture, there were unusually sharp gains in productivity during the war period.

As it is dealt with here, the term "productivity" refers to output, in physical units, per man-hour of work. It is a measure of the relationship between the volume of goods produced and one factor of input—labor time. Productivity data do not measure the specific contribution of labor or of capital or of any other factors of production. Changes in the ratio between output and man-hours of work show the joint effect of a large number of separate, though interrelated, influences. The long-term upward trend of output per man hour is

<sup>1</sup> Prepared in the Bureau's Productivity and Technological Development Division by Celia Star Gody and Allan D. Searle.

due mainly to technical improvements in industry. At any time, however, output per man-hour also depends on the rate of operations, the relative contributions to production of plants at different levels of efficiency, the types of resources and materials available, the flow of materials and components, and other circumstances. Moreover, output per man-hour is also affected by human factors—the skill and effort of the work force, the efficiency of management, and the state of labor relations.

The relationship between production and labor use is, in this article, generally expressed in terms of output per man-hour—the ratio of production to man-hours worked. This relationship may also be expressed in terms of the ratio of man-hours to production, or unit labor requirements; for some industries, such as shipbuilding, it is more convenient to deal with unit labor requirements. It is obvious that increases in output per man-hour are equivalent to decreases in man-hours per unit of output or unit labor requirements.

### *Productivity in Manufacturing Industries*

#### OUTPUT PER MAN-HOUR, 1900 TO 1939

Output per man-hour in manufacturing industries increased at an average rate of 3 to 3½ percent per year during the period 1909–39 (table 1). The increase is striking for both its magnitude and steadiness. From 1909 to 1914 productivity rose 16 percent. World War I interrupted the upward trend and productivity levels were almost the same in 1919 as in 1914. From 1919 to 1929, however, output per man-hour rose nearly three-fourths and from 1929 to 1939 increased an additional one-third; the total gain for the 20-year period between the two World Wars was 125 percent. Productivity increased each year from 1919 to 1939 with but three exceptions—from 1922 to 1923, 1931 to 1932, and 1936 to 1937—and the declines which occurred were small.

This steady improvement of productive efficiency was due mainly to the growth of scientific and technical knowledge and the utilization of this increased knowledge in industry. In a few industries, new equipment was developed which virtually revolutionized the production process (for example, the cigar machine, and the continuous strip mill in the steel industry). In many other industries, however, substantial increases in output per man-hour were achieved primarily through continuous small improvements in the equipment used, without fundamental changes in production methods. Highly specialized machines were designed for particular operations in the production process; new machines were more nearly automatic; and there was a trend toward the use of equipment of larger capacity. Accompanying progress in the design of equipment, were improvements in plant lay-out and in the flow of work through the various

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TABLE 1.—*Productivity Indexes for Selected Industries, 1909 to 1945*

[1939=100]

Year	Output per man-hour				Output per worker
	All manu- facturing <sup>1</sup>	Railroad transportation <sup>2</sup>	Mining <sup>3</sup>	Electric light and power <sup>4</sup>	
1909.....	38.1				66.3
1910.....					70.0
1911.....					73.1
1912.....					77.3
1913.....					72.4
1914.....	44.2				79.3
1915.....			48.6		76.9
1916.....		51.6	48.1		73.3
1917.....		54.2	48.5	43.1	78.1
1918.....		53.5	49.4		81.2
1919.....	43.8	56.7	49.6		81.1
1920.....	48.3	57.6	51.8		86.4
1921.....	52.7	58.5	54.2		73.6
1922.....	57.9	60.9	57.5	46.0	79.6
1923.....	57.3	62.9	59.0	51.0	81.8
1924.....	60.8	64.6	60.7	49.1	83.7
1925.....	65.0	68.2	62.6	50.4	88.5
1926.....	67.2	70.4	63.4	53.1	91.2
1927.....	69.3	70.2	65.3	52.7	88.3
1928.....	72.4	73.7	68.0		91.7
1929.....	75.5	75.1	69.9	54.1	91.5
1930.....	77.4	75.1	72.9	50.1	89.7
1931.....	81.0	75.6	77.2	51.9	98.9
1932.....	78.3	73.7	77.6	58.3	93.3
1933.....	82.9	83.0	78.8	68.1	89.1
1934.....	86.3	83.7	81.4	77.4	76.5
1935.....	91.0	87.6	84.9	82.5	87.4
1936.....	91.5	93.5	86.6	87.8	81.5
1937.....	90.3	95.2	88.0	89.6	105.1
1938.....	92.0	94.7	90.1	89.0	97.7
1939.....	100.0	100.0	100.0	100.0	100.0
1940.....		105.2	102.4	108.6	103.2
1941.....		115.5	105.4	123.2	107.4
1942.....		139.6	108.0	145.8	118.9
1943.....		150.9	108.6	182.7	116.8
1944.....		148.1	112.6	191.1	124.5
1945.....		139.5	117.8	181.4	122.2

<sup>1</sup> The production index for 1909, 1914, and the odd-numbered years 1919-39 is from Employment in Manufacturing, 1899-1939, by Solomon Fabricant (National Bureau of Economic Research). The index for the years 1920-38 was completed by interpolation, using the Federal Reserve Index for Manufactures. The index of man-hours was derived from an employment index, based on Census and BLS figures, and a series for average weekly hours including BLS figures for 1909, 1919, and 1923-39 and estimates for 1920-22 compiled by the WPA National Research Project.

<sup>2</sup> Class I steam line-haul railroads. The index for 1935-45 was prepared in the Bureau's Productivity and Technological Development Division; details are shown in a mimeographed report, Productivity and Unit Labor Cost in Steam Railroad Transportation: 1935-45. The series for the period 1916-34 is based on a slightly different index prepared by Witt Bowden, of the Bureau's Labor Economics Staff (see Monthly Labor Review, July 1937).

<sup>3</sup> The index of output per man-hour for 1935-45 was prepared in the Bureau's Productivity and Technological Development Division and includes 6 of the principal mining industries—bituminous coal, anthracite, crude petroleum and natural gas, iron, copper, and lead and zinc. The index of production was derived as a harmonic mean of the separate production indexes, weighted with current-year man-hours; the index of man-hours was based on totals for the 6 industries. The series for 1915-34 is based on an index covering virtually all mining industries and prepared by the WPA National Research Project. (Production, Employment, and Productivity in the Mineral Extractive Industries, 1880-1938.) The index for the 6 industries is in fairly close accord with the NRP index for the period 1919-34.

<sup>4</sup> Privately owned electric utilities. The index shows kilowatt-hours of electric energy distributed per man-hour of work, without distinction among different classes of service. Details of the procedures are shown in a mimeographed report, Productivity and Unit Labor Cost in the Electric Light and Power Industry: 1917-45.

<sup>5</sup> The index for 1935-45 was prepared by the Bureau's Productivity and Technological Development Division; details of the procedures are shown in a mimeographed report, Productivity in Agriculture: 1909-42. The series for 1909-34 was derived from indexes prepared by the WPA National Research Project and shown in the reports Trends in Size and Production of the Aggregate Farm Enterprise, 1909-36, and Trends in Employment in Agriculture, 1909-36.

stages of the production process, reducing idle time and the amount of labor needed for handling materials and work in process. The combined influence of better equipment and better organization of the production process is most clearly indicated in the economies gained by the use of line-production systems, notably in the automobile industry.

The use of improved production methods was also dependent, in part, on the production of large numbers of identical items, made possible by the existence of wide markets and an efficient transportation system. Contributions to the improvement of man-hour output were also made by increased study of some of the nontechnical factors affecting productivity—placement and training, job analysis, lighting, ventilation, control of noise, and the like.

It is well to remember that the experience of an industry as a whole does not necessarily correspond to the experience of individual plants or companies. Typically, there are wide disparities in productive efficiency among different plants, because of differences in equipment and methods, as well as in the quality of management, worker efficiency, and other factors. Mechanical equipment, especially, varies widely, reflecting differences in scale of operation, the date of plant construction, and management policy in regard to modernization.

While practically all industries achieved gains in productivity during this period, the rate of progress varied from industry to industry.<sup>2</sup> The greatest increases in productivity from 1919 to 1939 occurred in relatively new industries, in which the volume of output expanded rapidly. In the production of rayon, output per man-hour quadrupled between 1923 (the earliest date for which data are available) and 1939; in the manufacture of industrial chemicals, output per man-hour in 1939 was more than three times as great as in 1919. Productivity rose 180 percent in the automobile industry between 1919 and 1939 and even more in petroleum refining (290 percent) and rubber tires and tubes (325 percent between 1921 and 1939). Extremely large gains in man-hour output were also recorded for cigarettes, silk and rayon goods, glass, and alloying and rolling of nonferrous metals. The industries which showed the smallest advances from 1919 to 1939 were, in general, older industries which did not expand rapidly and in which manufacturing techniques were relatively stable, such as food processing, leather, furniture, and lumber.

#### OUTPUT PER MAN-HOUR SINCE 1939

Since the production pattern changed radically when the United States began its war program, it is not possible to measure the overall changes in manufacturing efficiency from peace to war. To do this would require, for example, some equating of ships, planes,

<sup>2</sup> Indexes for individual manufacturing industries for this period are shown in the mimeographed report *Productivity and Unit Labor Cost in Selected Manufacturing Industries, 1919-40*. February 1942.

and munitions against automobiles, vacuum cleaners, or typewriters. For some individual industries, much the same problem exists; hence, it is not possible to state whether physical output per man-hour increased or dropped when the automobile industry converted to production of war equipment. The same type of difficulty exists during peacetime, of course, whenever new products are introduced, but the changes are more gradual and do not usually affect seriously comparisons over reasonable periods of time.

While it is not possible to measure the productivity changes during the transition from peace to war in manufacturing as a whole, it is, nevertheless, possible to examine productivity changes in individual war industries and in certain nonmunitions industries which did not need to alter the nature of their production materially.

#### *Productivity in the War Industries<sup>1</sup>*

In the war industries, rapid advances in man-hour output were made as production expanded. The high production requirements for aircraft, ships, and other war goods permitted a change from custom to mass-production manufacturing methods, with very great savings in labor requirements. A large number of modern plants were constructed, incorporating assembly-line or prefabrication systems, special-purpose machinery, and other essentials of mass-production methods. In addition, war needs stimulated the development of some basically new techniques—in welding methods, for example, light metal technology, and the like.

In shipbuilding a few standardized types were selected to provide the bulk of the wartime program. The most important of the standardized types (in respect to number) was the Liberty ship. The new methods of construction called for considerable prefabrication of parts and subcontracting, as well as standardization of plans. Production commenced in 1941 and immediately large increases in productivity were forthcoming. Labor requirements per ship dropped from 1,150,000 man-hours in December 1941, when the first ships were delivered, to 515,000 man-hours per ship delivered in December 1944. This 55-percent decrease in unit labor requirements is equivalent to a productivity increase of over 120 percent. In 10 individual yards building Liberty ships, labor requirements per ship dropped an average of 19 percent each time production doubled.

There were large decreases in unit man-hour requirements for other types of ships as well. A 50-percent reduction over a 10-month interval occurred in yards building Victory ships. Man-hour requirements for two types of tankers dropped 38 percent from June 1943 to December 1944, and unit labor requirements for destroyer escorts

<sup>1</sup> See also *Wartime Productivity Changes in the Airframe Industry*, in *Monthly Labor Review*, August 1945, and *Productivity Changes in Selected Wartime Shipbuilding Programs*, in *Monthly Labor Review*, December 1945.



dropped 45 percent during the 10 months April 1943 to January 1944.

Even larger increases in productivity were achieved in the aircraft industry. Aircraft, before the war, were manufactured in small lots to the order of the individual customer. The wartime Government demand, however, enabled the industry to concentrate on producing large numbers of airplanes to a standard design. Jobs were simplified and specialized. In addition, special-purpose machines for working with light metals, automatic riveting devices, special hand tools, and other labor-saving innovations came into use.

Between the first quarter of 1942 and the last quarter of 1944, production of airframes multiplied sixfold, and productivity increased more than 160 percent during the 3 years. During 1942, many new plants entered production and the increase in productivity was relatively moderate—13 percent between the first and fourth quarters of the year. During 1943 and 1944, however, output per man-hour rose rapidly. From the fourth quarter of 1942 to the fourth quarter of 1943, a 74-percent increase in output per man-hour occurred, and between the fourth quarter of 1943 and the fourth quarter of 1944 productivity rose another 33 percent. The magnitude of the advance may be appreciated when it is compared with peacetime advances in new industries. The increase from the first quarter of 1942 to the last quarter of 1944 was greater than the total gain in productivity in the automobile industry from 1919 to 1929, the years of most rapid development. For individual aircraft plants, the improvement in productivity levels as production increased was remarkable. On the average, plants were able to reduce labor requirements per pound of airframe by 30 percent each time production doubled.

While complete data are lacking, there are indications that productivity increased considerably in other war industries as well. According to data compiled by the Army Service Forces, substantial gains in productivity were made in Government-owned privately operated ammunition plants. Productivity advanced 33 percent for the shell- and bomb-loading industry and 40 percent for the small-arms ammunition industry during 1943. Productivity jumped 45 percent in the manufacture of TNT from April 1943 to the end of the year.<sup>4</sup>

#### *Productivity Changes in Nonmunitions Industries*

The course of productivity in those nonmunitions industries for which data are available contrasts with the large and rapid gains made in munitions industries. While some of the nonmunitions industries made important contributions to the war effort, no important changes in production techniques could be made, replacement of equipment was difficult, and the manpower shortage was especially

<sup>4</sup> U. S. Senate, Special Committee to Investigate the National Defense Program, Third Annual Report, March 1944 (p. 173).

severe. Thus, the basis for wartime increases in man-hour output was lacking.

Table 2 presents indexes of output per man-hour for 32 nonmunicipal manufacturing industries from 1939 to 1945. In 1939, these industries employed approximately one-third of the total number of wage earners engaged in all manufacturing industries. The industries listed represent more than half the 1939 employment in food, tobacco, basic lumber products, leather, paper manufacture, textiles, petroleum and coal products, and over one-third of the total in printing and publishing, chemicals, and stone, clay, and glass. Important segments of the manufacturing economy—e. g., steel, automobiles, rubber products, and machinery—are omitted, however, and changes in these industries cannot be assumed to represent the change in manufacturing as a whole.

While the industries for which statistics are presented continued to manufacture the same general types of products as in peacetime, in some of them there were shifts in the nature of the products which cannot be fully reflected in the measures of production. Specifications for products for military use—for example, cotton textiles—were in many instances far higher than for civilian goods. In some industries, there was a shift to the manufacture of items in the higher price lines; in others, there was a deterioration in the quality of the goods manufactured for the civilian market; and in some cases, there were substitutions in the materials used. For these reasons, the indexes are necessarily approximations and cannot, in some cases, be interpreted as showing precise changes in man-hour output from year to year.

The production indexes are based on statistics for the quantities of the separate products manufactured by each industry. In most instances, the products included cover virtually the entire output of the industry, but, in some cases, minor products could not be included. The production figures generally are based on a complete canvass of all plants producing the respective items. The trends of employment and man-hours, on the other hand, are, for most industries, based on a sample of plants which report to the Bureau of Labor Statistics; but this sample represents fairly accurately the changes in total employment in the industry.

Man-hour output in these 32 industries generally increased from 1939 to 1941, turned downward from 1941 to 1943, leveled off in 1944, and increased in 1945. Increases in productivity were experienced by 24 of the component industries between 1939 and 1940, and productivity rose in 25 industries between 1940 and 1941. However, productivity levels fell in 19 of these industries from 1941 to 1942 and decreased in 22 from 1942 to 1943. Output per man-hour increased in 20 of the industries from 1943 to 1944 and, from 1944 to 1945, rose in 25 of the 29 industries for which data are available.

TABLE 2.—*Indexes of Productivity in 32 Nonmunitions Manufacturing Industries*<sup>1</sup>

[1939=100]

Manufacturing industry	Output per man-hour					
	1940	1941	1942	1943	1944	1945
Beet-sugar refining <sup>2</sup> .....	103.5	100.9	93.0	78.8	82.6	88.0
Boots and shoes.....	105.6	113.2	111.8	111.1	105.9	110.6
Bread and other bakery products.....	.....	105.0	106.9	113.1	111.2	126.1
Cane-sugar refining.....	103.5	113.4	82.8	91.3	96.6	92.2
Canned and preserved fruits and vegetables.....	107.1	110.4	123.6	120.8	119.6	123.2
Canned and cured fish.....	122.4	112.1	92.2	84.4	97.3	104.3
Cement.....	100.4	108.3	108.4	94.7	83.8	89.4
Clay construction products.....	103.1	106.4	97.4	81.3	83.0	89.2
Beehive coke.....	99.2	102.0	103.9	104.8	109.7	.....
Byproduct coke.....	104.6	105.4	106.2	98.2	103.0	.....
Condensed and evaporated milk.....	109.7	119.3	108.6	102.2	106.1	112.3
Confectionery.....	105.6	108.3	104.2	106.5	116.4	117.8
Cotton goods.....	102.5	102.7	102.2	100.8	100.4	100.7
Fertilizers.....	110.3	110.8	102.5	102.1	108.2	113.2
Flour and other grain mill products.....	99.6	100.3	94.7	85.2	85.2	93.0
Glass products.....	99.8	104.1	102.9	109.2	107.6	121.3
Hosiery.....	108.4	109.1	113.9	123.5	130.5	137.9
Ice cream.....	107.0	127.0	147.1	142.0	151.2	153.1
Leather.....	101.0	110.0	116.5	110.7	114.5	115.4
Lumber and timber products—Sawmills.....	111.7	105.5	98.1	95.1	96.0	.....
Malt liquors.....	98.0	99.0	100.7	92.9	92.6	92.3
Newspaper and periodical printing and publishing.....	103.8	106.2	105.7	101.4	87.5	88.7
Nonferrous metals—Primary smelters and refineries.....	108.0	103.1	102.3	99.4	97.4	95.9
Paints and varnishes.....	100.1	113.8	108.8	109.8	114.1	120.3
Paper and pulp.....	104.2	106.7	101.8	94.7	92.7	95.2
Petroleum refining.....	102.9	107.7	101.5	94.2	95.6	94.0
Rayon and allied products.....	113.7	127.2	141.3	135.5	141.5	151.0
Slaughtering and meat packing.....	102.1	101.2	96.0	96.9	102.3	111.0
Cigars.....	100.0	101.5	103.2	105.7	117.0	133.2
Cigarettes.....	100.0	108.9	112.2	111.0	113.2	119.8
Chewing and smoking tobacco and snuff.....	104.3	108.3	98.8	89.3	85.1	87.1
Woolen and worsted goods.....	.....	.....	100.2	107.9	116.4	118.2

<sup>1</sup> Indexes of production, employment, man-hours, and pay rolls, together with the details of the methods used in the preparation of the indexes, are shown in the mimeographed report *Productivity and Unit Labor Cost in Selected Manufacturing Industries, 1939-45*.

In some of the industries listed above, there have been changes in the nature of the products which cannot be measured and are not fully reflected in the indexes of output per man-hour. It is believed that the indexes of output per man-hour are satisfactory to show the general trends since 1939, but they may not in all cases indicate the precise changes from year to year.

<sup>2</sup> Indexes for beet-sugar refining are on the basis of a fiscal year beginning in March.

While there is a general pattern in the direction of year-to-year changes in output per man-hour for this group of industries, reflecting wartime economic conditions, there are also substantial variations among different industries in the net changes in man-hour output since 1941. One of the most important reasons for these differences is the fact that in some industries the volume of production increased because of expanded war requirements, while in others output declined as a result of wartime restrictions. Where volume was reduced, output per man-hour necessarily suffered. In industries in which production rose, output per man-hour generally advanced despite wartime operating difficulties.

Thus, of the 13 industries in which man-hour output for 1945 was higher than for 1941, in all but 3 (hosiery, leather, and cigars), the 1945 production level was also higher. Conversely, in almost three-fourths of the industries in which productivity declined, production also fell. For example, in the clay-construction products industry,



which was severely affected by the restrictions on new construction, production dropped 53 percent between 1941 and 1945 and productivity declined 16 percent. Similarly, in the cement industry, productivity and production rose from 1939 to 1942, then declined substantially until, in 1944, productivity had fallen 23 percent and production had dropped 45 percent below 1941 levels. From 1944 to 1945 an increase of 13 percent in cement production was accompanied by a 7-percent rise in man-hour output. Likewise, in newspaper and periodical printing and publishing, a 20-percent drop in production between 1941 and 1944 was related to an 18-percent decline in productivity. Other industries in which both production and productivity declined significantly during the war are beet-sugar refining and chewing and smoking tobacco.

Productivity changes were not uniformly related to like changes in the volume of production, however. Productivity increases in excess of 10 percent from 1941 to 1944 (the last full year of the war) occurred in only 4 industries—hosiery, ice cream, rayon, and cigars. In two of these (hosiery and cigars) production declined, and in the other two increased only moderately. On the other hand, output per man-hour dropped between 1941 and 1944 in flour and other grain mill products, cane-sugar refining, condensed and evaporated milk, malt liquors, and petroleum refining, although production was near the 1941 levels or higher.

The general, if moderate, increases in productivity between 1944 and 1945 seem especially significant. Producers of goods for civilian use apparently were able to cope with wartime problems more successfully, once the shift to the war production program had been completed and operations had been stabilized, than during the initial transition. This fact is suggested by the evidence that productivity was stable between 1943 and 1944, while small declines generally occurred during 1941-42 and in 1942-43. In addition, the relaxation of some controls during the last part of 1945, as well as the easing of materials and labor shortages, may also have contributed to the improved record.

During the first half of 1946, despite the unsettled conditions, productivity levels in those industries for which statistics are available were generally higher than in the same months of 1945. As might be expected, the largest gains occurred in industries which were able to expand production as soon as wartime restrictions were ended. Increases in man-hour output of 20 percent or more between the first half of 1945 and the first half of 1946 are shown for cement and clay construction products. Other industries for which substantial increases in productivity are shown (5 percent or more) are glass, cigars, newspaper and periodical printing, paper and pulp, cigarettes, rayon and allied products, paints and varnishes, and boots and shoes. With a single exception, production levels during 1946 were higher

than in 1945 in the industries in which man-hour output increased. On the other hand, moderate declines in man-hour output were experienced in those industries in which the volume of output declined.

#### FACTORS AFFECTING PRODUCTIVITY DURING THE WAR

The productivity record in the war industries is generally recognized as a magnificent accomplishment. It is not usually appreciated, however, that the performance of the nonmunitions industries was equally creditable, in the face of the many serious operating problems encountered. Some discussions have implied that the small decline in man-hour output in the nonmunitions industries reflects a decrease in "worker efficiency." It is not possible, however, to isolate the effects of individual efficiency from the many other influences which determine output per man-hour. It is true, of course, that a trained worker can produce more in an hour than an untrained worker if other factors affecting productivity are held constant, but "worker efficiency" is not necessarily the most significant element. Thus, the greatest increases in man-hour output were made in war industries even though many new and untrained workers were entering war plants. As has been indicated, these gains were achieved largely because of the adoption of mass-production methods.

Among the many factors which determine the relationship between output and labor input, the most important are probably the production methods and the quality of the equipment used. In "normal" times, it has been possible for productivity levels to rise year after year mainly because there have been steady improvements in processes and equipment. The advance in man-hour output has its origin in technical innovations, but it continues for many years after the new methods are introduced. Since most industrial equipment has a long life and is not scrapped until significant economies can be gained, new methods are not adopted throughout industry as soon as they are developed but find acceptance only after a period of years. Thus, man-hour output continues to increase even when there are no new technological developments, as additional plants adopt the most efficient methods.

During the war, there was vastly increased technical research, but it was concentrated in the war industries. Many new techniques were developed to speed war production or to improve the quality of war equipment. The industries manufacturing goods for civilian use, on the other hand, were not in a position to make any significant changes in production methods. Technical personnel was drawn into the war industries and the capital-goods industries were converted to the production of equipment for war plants. In many instances, it was difficult to obtain equipment needed for replacement, and machines which might otherwise have been discarded remained in service.

A Department of Commerce study, comparing expenditures from July 1940 to December 1943 with those made during the period January 1937 to June 1940, indicates clearly the concentration of investment in the war industries.<sup>5</sup> Expenditures in facilities for the production of aircraft, ships, combat vehicles, explosives, guns, ammunition, shells, and bombs amounted to 10.5 billion dollars, from July 1940 to December 1943, out of a total investment of 20.5 billions for all manufacturing plant and machinery. In the prewar period investment in these industries was negligible. The great capital outlays in these industries during the war formed the basis for the adoption of mass-production methods which, together with new techniques and specially designed machinery, contributed to the large wartime increase in productivity.

In such basic industries as steel, nonferrous metals, machinery, chemicals, synthetic rubber, and aviation gasoline, investment from July 1940 to December 1943 totaled 7.7 billion dollars compared with 2.5 billion for the preceding 3½ years. While much obsolete equipment was also brought into use in these industries during the war, the average efficiency of facilities no doubt increased.

In industries producing goods for civilian consumption, however, investment dropped from 3.0 billion dollars in the period January 1937-June 1940 to 1.8 billion in the period July 1940-December 1943. During 1944 the rate of expenditures for plant and equipment was 50 percent higher than during the period July 1940-December 1943 but remained below prewar levels. Moreover, these figures understate the decline in physical investment since they do not reflect price rises or the amounts spent by these industries on war items. The non-munitions industries may have had poorer plants at the end of the war than at the beginning. In any event, it is clear that they were unable to make any substantial improvements during the war period.

While technical factors were the most important, many other elements influenced wartime productivity levels. Increases in the proportion of capacity utilized tended to raise productivity in some industries during the early phase of the war production program, especially where the proportion of "indirect" labor is high, as in the steel industry. In other industries, however—cement, for example—a decrease in capacity utilization attributable to wartime restrictions contributed to a decline in productivity. Intermittent interruptions in the flow of materials had detrimental effects on man-hour output even where there was no general decline in the level of operations. Where such interruptions occurred, workers were sometimes kept on the pay roll even though idle part of the time, and it was impossible to organize the production process efficiently. Many war plants suffered from interruptions of this sort during the early part of the war, as supplies of raw material became scarce. Nonmunitions

<sup>5</sup> Wartime Construction and Plant Expansion, by D. Stevens Wilson, in *Survey of Current Business*, October 1944.



industries, with last call on materials supplies, also were affected by wartime bottlenecks. Moreover, changes in the types of materials available from time to time required modifications of manufacturing methods and resulted in loss of productive efficiency.

The wartime change in the composition of the work force made it necessary for management to give more attention to training programs, recruitment policies, working conditions, supervision, and morale than was customary in peacetime. Millions of men were drawn from jobs in industry into the armed forces and these workers were generally in age groups where there is probably high individual efficiency. Unemployment virtually disappeared, and new workers were recruited largely from groups with little industrial training—women, high-school students, older persons, and minority groups. Thus, the number of males gainfully employed dropped nearly 2 million from May 1940 to May 1945, while the number of female workers rose 7 million. The industries which produced civilian-type goods were more severely handicapped by the change in the labor force than were the war industries. The nonmunitions industries lost skilled workers to the higher-paying war plants and to the armed forces, whereas workers were channeled into war industries by manpower controls and high wage rates. Much has been said concerning the "inferior" quality of the wartime labor force. Available evidence, however, indicates that in most industries the way labor was utilized was of more significance than the training and abilities of individual workers.

It is frequently overlooked that there was dilution within the management group equivalent to that which took place within the labor force. Many management officials were drawn from established industries to staff the new war plants and others went into the armed forces. The magnitude of the over-all volume of production during the war period made necessary a large increase in the size of the management and supervisory group. As a result, management and supervisory positions were, in some instances, necessarily assumed by persons with little previous qualifying experience.

Many wartime circumstances made effective labor utilization more difficult. High labor turn-over, or more specifically the high "quit" rate, was one of the most serious problems. The number of persons who quit their jobs increased from less than 1 per month for each hundred persons employed in 1939 to 6.3 per hundred in August and September 1943, a rate not equaled again until September 1945, when the quit rate rose to 6.7 per hundred. While increased labor turn-over was inevitable in the process of staffing the war industries, it was detrimental to maximum productivity in a number of respects. Production was interrupted; replacements often required considerable training before attaining sufficient ability; and time of supervisors and other employees was consumed in training new workers. Simi-

larly, unscheduled absences from the job were higher than in peacetime because of the employment of women with home responsibilities, the lengthening of hours of work, and shortages of housing, transportation, and essential services. High absenteeism may result in a loss of productive efficiency, since it makes necessary some improvisation of job arrangements. Information collected during the war period showed wide variation in the absence rate from plant to plant, depending on management practices.

In some instances, the longer wartime hours may have tended to increase fatigue and to reduce productivity. The average length of the workweek in manufacturing industries increased from 37.3 hours per week in July 1940 to 45.6 hours in December 1944. In some entire industries (for example, machine tools and machine-tool accessories) and in many more individual plants, work schedules averaged considerably in excess of 50 hours per week. Where hours of work were extremely long or where there was a 7-day week, productivity levels suffered. Moreover, second or third shifts were added by many industries in efforts to increase the utilization of their facilities. Both workers and managements experienced difficulty in adjusting to evening or night shift operating conditions.

#### OUTLOOK FOR MANUFACTURING INDUSTRIES

There is every indication that the advance of productive efficiency is being resumed and that the rise in productivity will be unusually rapid during the coming few years. The special wartime difficulties which hampered productivity gains in the nonmunitions industries have already disappeared or will be eliminated in the near future. There are hardly likely to be any persistent difficulties in the way of recruiting an adequate labor force. Materials will be available in sufficient supply to permit efficient operation, even though it may be impossible to meet all of the pent-up demand immediately. Plant operations will generally be more stable. For example, changes in the nature of the products manufactured or in the materials used will occur more slowly and there will be greater opportunity for advance planning of such changes. In practically all industries, there will be rather intensive utilization of capacity. This factor will be of particular importance in industries which operated at a reduced level during the war and which suffered declines in productivity as a result.

In the durable goods industries which were converted to war production, productivity should compare favorably with prewar performance once capacity operations are achieved. Manufacturers of consumer durable goods of all types will be in an excellent position to achieve improvements in productive efficiency, since there are large markets and production will be high for some time to come. In some cases, experience gained in war production will be applied to the manufacture of peacetime products, particularly where the production

methods used for war items were similar to those used for the normal range of products.

The most important factor which will tend to raise productivity levels will be widespread installation of new equipment. As previously indicated, expenditures for new plant and equipment in non-munitions manufacturing industries during the war period were little more than half as great as in the preceding peacetime years. Much of the equipment in use is worn out or obsolete and will be replaced within the next few years. It is likely that expenditures for new plant and equipment will be well above the "normal" rate for several years in all manufacturing industries, except those few in which capacity was expanded during the war to a level in excess of what will be required for peacetime production.

The belief that productivity will rise rapidly during the coming period is supported by available evidence on recent expenditures for plant and equipment and on plans for future expenditures. A study by the U. S. Department of Commerce and the Securities and Exchange Commission provides some information on planned expenditures for new plant and equipment in manufacturing and mining combined. Expenditures planned for the second and third quarters of 1946 total 3.4 billion dollars. On an annual basis, such expenditures would be almost three times as large as those made in 1939 and would substantially exceed the level of 1941, when many of the new-equipment purchases were designed for the production of munitions. It is interesting to note that actual expenditures rose sharply with the end of the war. During the last quarter of 1945, 1.4 billion dollars was spent for plant and equipment and during the first quarter of 1946, 1.2 billions, compared with an average quarterly expenditure of 750 millions during January–September 1945.

An earlier study of planned expenditures for equipment made by the Department of Commerce provides some indication of the probable distribution of expenditures among the various industries.<sup>6</sup> As might be expected, the greatest increases, relative to the prewar period, were contemplated in those industries which were not able to add any great amount of new equipment during the war period and in those industries which were converted to war production—textiles, apparel, and leather; pulp, paper and printing; transportation equipment, including automobiles; and machinery, including electrical equipment.

These large-scale installations of new equipment will make possible substantial increases in man-hour output. Even if the types of equipment purchased were not fundamentally different from those available before the war, a high rate of investment in equipment would rapidly raise the average quality of all equipment in use and would

<sup>6</sup> Planned Capital Outlays and Financing, by D. Stevens Wilson, in *Survey of Current Business*, June and July 1945.



permit retirement of the least efficient machinery. It is likely, however, that the types of equipment installed will be superior to those which were available before the war, and this factor should permit additional gains in productive efficiency. Techniques developed for war production, as in metalworking and electronics, will undoubtedly contribute to the advance of productivity over a period of years.

### *Productivity in Nonmanufacturing Industries*

The types of difficulties which handicapped operations in the non-munitions manufacturing industries during the war period were prevalent, to a greater or lesser extent, in virtually all industries. The general shortage of manpower, restrictions on new-equipment installations, and shortages of materials had their effects throughout the economy. The severity of the operating problems varied from industry to industry, however, depending on the importance of the industry in the war-production program. Those industries producing goods which were not essential suffered most seriously, for they had last call on available manpower, materials, and machinery. Activities directly supporting the war effort, on the other hand, were not affected to the same extent by wartime restrictions. In the latter category were some nonmanufacturing industries which were vital to the successful prosecution of the war—mining, railroad transportation, electric light and power, and agriculture. Special efforts were made to supply these industries with needed equipment and to keep them adequately staffed. In each of these activities, the obstacles to efficient operation were outweighed in importance by other factors, and substantial gains in man-hour output are recorded for the war period.

#### MINING

In mining, as in manufacturing, productivity has increased steadily in the past. Considering the major mining industries together, output per man-hour doubled during the 20-year period 1919–39, rising at an average rate of 3 percent annually (table 1). The continued advance in output relative to labor time resulted mainly from the steady growth of mechanization and improvement in the types of equipment used. In bituminous-coal mining, for example, 60 percent of total underground production was cut by machine in 1919, 78 percent in 1929, and 88 percent in 1939. Similarly, mechanical loading of coal, a more recent development, was used for less than 1 percent of total underground production in 1924, but rose to 31 percent of the total in 1939. Strip mining, which is far more efficient than underground mining with respect to man-hour requirements per ton, contributed little more than 1 percent of the total coal tonnage in 1919, but almost 10 percent in 1939. Comparable improvements were made in metal mining, including more extensive mining by open-cut

methods. New processes of recovery developed for nonferrous metals made it economical to mine large masses of easily accessible low-grade ore.

Man-hour output continued to rise in the mining industries during the war years. For the major mining industries together, the gain in productivity was 18 percent from 1939 to 1945 and 12 percent from 1941 to 1945. Despite wartime shortages, a considerable amount of new equipment was installed—mobile loading machines and conveyors in underground coal mines, larger draglines and new-type excavators in some surface stripping operations, belt conveyors and larger capacity trucks in certain open-cut metal workings, and new drilling rigs and ore-handling devices in underground metal mines. Moreover, special efforts were made to maintain an adequate labor force. For example, in 1942, prior to the adoption of Nation-wide manpower controls, the War Manpower Commission imposed a "freeze" on separations in nonferrous-metal mining, and in the same year the War Labor Board granted wage increases to nonferrous-metal miners, precisely because the importance of maintaining an adequate labor force was recognized. Since these measures were not adequate, Government authorities took the drastic step of furloughing nonferrous-metal miners from the armed forces.

The largest increase in productivity during the war period occurred in the extraction of crude petroleum and natural gas—28 percent between 1939 and 1945. This gain was attributable in part to a reduction in the proportion of labor devoted to the development of new wells. The number of wells drilled dropped sharply between 1941 and 1943. With accelerated well drilling in 1944 and 1945, the advance in man-hour output was halted. There was also a substantial increase in output per man-hour in bituminous-coal mining—20 percent between 1939 and 1945. Machine-cutting, strip mining, and mechanical loading all continued to grow in importance during the war years. Particularly significant is the increase in mechanical loading—from 31 percent of the total underground output in 1939 to 41 percent in 1941, and to 53 percent in 1944. In iron-ore mining, productivity in 1945 was 17 percent above the 1939 level, although slightly lower than in 1941. Open-pit mines increased their share of total iron-ore output from 62 percent in 1939 to 74 percent in 1944.

The large wartime requirements for nonferrous metals could be achieved only by working deposits which would not be economical sources in normal times. In order to encourage production from leaner ores, the Government made premium payments for copper and for lead and zinc produced in excess of fixed quotas. In both copper mining and lead-and-zinc mining, the percentages of recoverable metal in the ores mined declined substantially after 1939. Sharp gains were made in ore output per man-hour in both industries,

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but comparable advances were not achieved in recoverable metal production per man-hour. Despite the necessity for mining leaner deposits, recoverable copper mined per man-hour was 15 percent higher in 1945 than in 1939, with most of the gain occurring after 1943, as production declined. The rise in productivity reflects an increase in the proportion of output contributed by open-cut mines. In lead-and-zinc mining, productivity fell about 13 percent from 1939 to 1943, but by 1945 the 1939 level was regained (table 3).

TABLE 3.—*Indexes of Productivity in Selected Nonmanufacturing Industries*<sup>1</sup>

[1939=100]

Nonmanufacturing industry	Output per man-hour					
	1940	1941	1942	1943	1944	1945
Mining:						
Bituminous coal.....	103.9	105.8	107.1	106.8	116.0	119.6
Anthracite.....	101.1	105.7	98.3	95.3	102.6	99.6
Crude petroleum and natural gas.....	98.8	104.5	118.7	126.9	127.4	127.7
Iron ore.....	118.8	119.7	110.7	101.2	110.2	117.3
Copper:						
Recoverable metal.....	104.2	100.3	102.5	103.7	113.6	115.1
Ore.....	108.2	108.1	114.9	123.0	140.7	149.2
Lead and zinc:						
Recoverable metal.....	97.2	99.2	91.1	87.2	95.7	99.2
Ore.....	100.3	108.7	103.2	112.0	134.0	145.3
Steam railroad transportation: <sup>2</sup>						
Revenue traffic.....	105.2	115.5	139.6	150.9	148.1	139.5
Car-miles.....	102.5	104.2	108.7	103.9	101.2	95.3
Electric light and power <sup>3</sup> .....	108.6	123.2	145.8	182.7	191.1	181.4
Agriculture <sup>4</sup> .....	103.2	107.4	118.9	116.8	124.5	122.2

<sup>1</sup> Indexes of production, employment, man-hours, and pay rolls, together with the details of the methods used in the preparation of the indexes, are shown in a series of mimeographed reports: Productivity and Unit Labor Cost in Selected Mining Industries: 1935-45; Productivity and Unit Labor Cost in Steam Railroad Transportation: 1935-45; Productivity and Unit Labor Cost in the Electric Light and Power Industry: 1917-45; Productivity in Agriculture: 1942-45.

<sup>2</sup> Class I steam line-haul railroads.

<sup>3</sup> Privately owned electric utilities.

<sup>4</sup> Output per worker.

It seems likely that man-hour output in the mining industries will continue to rise in the future at a rate comparable with that achieved in the prewar period. As in manufacturing, much new equipment will be purchased as soon as it is available. The most efficient methods will gradually be adopted by additional mines and improvements will doubtless be made in the design of equipment. The proportion of copper and iron mined in open-cut operations and of coal extracted by stripping may continue to increase. Since these methods require less labor than underground mining, productivity will tend to rise as a result. An additional factor which may tend to raise man-hour output in metal mining will be the abandonment of the least productive mines and ore deposits. On the other hand, it may be necessary, for a time, to devote a relatively large amount of labor to development work. Since such labor will not yield any immediate output, this factor may tend to retard the gains in productivity. Well-drilling in crude petroleum and natural gas was below the prewar rate in 1944 and 1945 and additional development work will probably be essential if produc-



tion is to be sustained. In iron mining, too, it may be necessary to develop new ore beds, possibly of lower grade. This factor is unlikely to be of major significance, however, and continued increases in man-hour output may be anticipated in the mining industries.

#### RAILROAD TRANSPORTATION

Productivity in railroad transportation (measured in terms of passenger mileage and freight ton-mileage carried per man-hour of labor) has, in the past, increased at a rate only slightly lower than in manufacturing and mining. Output per man-hour rose approximately 75 percent from 1919 to 1939; the average rate of increase was nearly 3 percent per year (table 1). During this period, there was a steady rise in the average tractive effort of locomotives, train speeds were increased, and freight cars of larger capacity were added. Moreover, improvements were made in the methods used for constructing roadway and there was a trend toward greater durability of rail and ties, with a consequent reduction of the amount of labor needed for construction and maintenance.

As a result of the huge increase in traffic during the war, man-hour output jumped 48 percent from 1939 to 1944; but, with the decline in traffic between 1944 and 1945, it fell 6 percent. During the first quarter of 1946, man-hour output was 7 percent below the level for the year 1945 but remained 30 percent higher than in 1939. The tremendous wartime gain in productivity, unlike the steady advance in the period before the war, did not arise from any fundamental improvement in operating methods, but resulted in large part from more complete loading of cars. It is apparent that the volume of traffic carried per man-hour depends, to a great extent, on the average load per car, since an increase in the average load does not require a proportional increase in the amount of labor.

War requirements made extremely heavy demands on the railroads. During 1944, the peak year, the volume of freight and passenger traffic was 144 percent higher than in 1939; the number of passenger-miles traveled was four times as great as in 1939 and freight ton-mileage more than twice as great. This enormous increase in the volume of traffic was achieved with little addition to rolling stock. No new passenger cars were built during the war period, and only small numbers of locomotives and freight cars were added. Both passenger and freight cars were more fully loaded and more continuously used, and this factor accounted in large part for the great increase in man-hour output.

The number of car-miles traveled per man-hour of work, which shows productivity in terms of carrying space provided, increased 9 percent from 1939 to 1942, despite heavier loading of cars. In contrast, car-miles per man-hour declined 8 percent from 1943 to 1945, although there was no further increase in average load during this

period. Few basic improvements in operating methods could be made in the face of the wartime shortages of labor and materials. The use of rolling stock due for retirement doubtless also contributed to the decline in the index of car-miles per man-hour. Moreover, the loss of experienced railroad workers presented grave operating problems.

It seems certain that there will be some decline in revenue traffic per man-hour in the immediate future, as the volume of traffic and the utilization of car capacity decline. Civilian passenger travel obviously does not permit as complete use of facilities as did troop movements. In any event, with alternative forms of transportation available, passengers will not be willing to tolerate the overcrowding which was prevalent during the war. Freight shipments have been changed in character, so that cars are not so fully loaded or so continuously used, a change reflected in the severe shortage of freight cars. Moreover, because of the extreme shortage of railroad labor during the war, some maintenance work was postponed, and it may be necessary to increase the amount of labor devoted to such work.

After the initial readjustment to a lower volume of traffic, however, the long-term upward movement of productivity will doubtless be resumed. Track maintenance work and yard operations will probably be mechanized to a greater extent, and track and roadbed may be of more durable construction. In addition, modern locomotives and rolling stock will be purchased, and modern communications devices will be more widely used. The competition of other means of transportation will doubtless stimulate the modernization of equipment in the railroad industry. A survey made by the Department of Commerce and the Securities and Exchange Commission indicates that the railroads are planning capital expenditures of 360 million dollars for the second and third quarters of 1946. On an annual basis, this expenditure would be the highest since the year 1929, and would be twice as high as the average annual expenditures during the years 1937-40. The expenditures planned for 1946 are also substantially higher than the average for the years 1941-44. Since the amount of traffic will be below the wartime peak, such investment will permit substantial improvements in roadway and equipment and will permit retirement of the least efficient equipment.

#### ELECTRIC UTILITIES

The amount of electric energy distributed per man-hour worked by employees of electric light and power companies more than doubled from 1917 to 1939. The gain in productivity was moderate between 1917 and the early thirties, averaging  $1\frac{1}{2}$  percent per year. Thereafter, however, man-hour output advanced extremely rapidly, with an annual rate of increase of approximately 8 percent between 1930 and 1941 (table 1). In generating stations, savings of labor resulted

from the use of larger-capacity equipment at higher pressures and temperature, increased fuel efficiency, and improved methods of handling fuel. Better transmission and distribution systems permitted a decrease in power losses as well as reduction in the amount of labor needed for maintenance and repair. One of the important factors contributing to the rise in man-hour output has been the increase in the amount of electric energy consumed per customer. This factor has permitted a reduction in the proportion of labor which must be devoted to installation, maintenance, and clerical work. The rapid increase in output per man-hour during the thirties parallels a rise in the amount of electric energy consumed per customer, from 2,900 kilowatt-hours in 1934 to 3,600 in 1939. The increase in the amount of energy consumed per customer was attributable both to greater use of electric power in industry and to more extensive use of radios, refrigerators, and other electrical appliances in the home.

Total requirements of electric energy and the average consumption per customer went up sharply during the war period. As a result, output per man-hour rose even more rapidly than during the thirties, and in 1944 was 91 percent above the 1939 record. A small decline in man-hour output is shown for 1945, reflecting the decline in power requirements of large industrial users with the end of war production. Many measures which were adopted to meet wartime power requirements contributed to the unusually sharp gain in output per man-hour. For example, power-pooling agreements and the adoption of "war time" permitted greater use of generating capacity. Bimonthly meter reading saved a large amount of clerical and meter readers' labor and there was some restriction on new installations.

Output per man-hour during the year 1946 will undoubtedly be lower than during the peak war period, since average consumption of electric energy per customer will be reduced and additional new installations will be made. As in the case of the railroads, the decline in productivity will probably be of brief duration. In the longer run, there will doubtless be continued advance in man-hour output. The indications are that the electric utilities are planning moderate increases in capital expenditures over the prewar averages, and continued improvement of operating efficiency may be anticipated. It is possible, however, that productivity will not continue to advance at the rapid pace shown before the war. Ultimately, the rate of increase in average requirements per industrial user may taper off and there may be some retardation of the growth of average consumption of electricity for domestic use as well. Should this occur, it is probable that the rise in man-hour output will be more moderate than during the thirties.

#### AGRICULTURE

The long-term rise in productive efficiency in agriculture has been more moderate than in the other industry divisions considered.



Satisfactory information cannot be compiled on output per man-hour since data are not available on average hours per worker. An index of output per worker (including proprietors) is, however, available from 1909. This index shows fairly wide fluctuations from year to year. The relationship between production and labor input depends, in part, on weather conditions. Moreover, the tendency of workers to turn to agriculture in times of depression and to enter into nonagricultural employment in times of prosperity also makes for short-term fluctuations in output per worker. Nevertheless, there has clearly been an upward trend in productive efficiency. Between 1919 and 1939, output per worker rose about 25 percent (table 1). The major influences tending to raise productivity have been mechanization, particularly the adoption of the tractor, and improvement of farm practices, for example, the development of improved plant varieties, pest control, and the use of improved breeding and feeding practices for livestock.

Output per worker rose 25 percent between 1939 and 1944 and declined only slightly between 1944 and 1945. This advance is due in part to favorable weather conditions and also to an increase in average hours per worker. However, the large wartime rise in output per worker also suggests the extent of "hidden unemployment" in agriculture in the prewar period. It is worthy of note that the wartime advance in productivity was achieved despite the restrictions on the production of new farm equipment. Expenditures on equipment during the period July 1940–December 1943 were approximately the same as during January 1937–June 1940.

It is probable that there will be a considerable amount of mechanization of farming operations. During the war, farm income was at a high level and production of agricultural machinery, restricted because of shortages of materials, was far below the demand for such equipment. Equipment purchases will now be made at an increased rate, and many new types of machines will probably be introduced. An improved cotton picker has been developed which is said to be applicable in the major cotton-growing regions. This picker, or other models, may be adopted on a substantial scale in the years to come. Machines for thinning and harvesting sugar beets, another labor-consuming crop, may also find wide use. A variety of other machines will probably be used to a greater extent, among them improved corn pickers and hay balers. A number of new farm machines specially adapted to the needs of small farms have recently been announced. Continued progress may be expected in the development of superior plant varieties, improved methods of pest control, greater control of erosion, and better breeding practices. Thus, the upward trend of productivity will doubtless continue.

If jobs outside of agriculture are abundant, the number of persons engaged in agriculture will be lower than before the war and high productivity levels will be favored. Moreover, if there is reasonably high employment and if farm wages are high, mechanization will be extended rapidly; if agricultural labor should become available at low wages, the rate of investment in new equipment would be smaller.

### *Unit Labor Cost, 1939 to 1945*

Output per man-hour, together with average hourly earnings, determines the wage payments made per unit of output, or unit labor cost. Unit labor cost may be derived as the ratio between the total wage bill and total physical output; or it may be derived as the ratio between wages paid per man-hour (average hourly earnings) and output per man-hour. Thus, unit labor cost varies directly with average hourly earnings and inversely with output per man-hour. If output per man-hour is advancing, unit labor cost will decline unless there are increases in average hourly earnings larger than the gains in output per man-hour. Conversely, if average hourly earnings increase, unit labor cost will also rise unless the increase in average hourly earnings is overbalanced by gains in output per man-hour.

Unit labor cost does not show the proportion of the total value produced which is distributed as wages. Moreover, for any industry, it shows changes in only one cost factor—labor. To analyze changes in total production costs, it is necessary to have information on changes in materials costs and in overhead costs, as well as in labor costs. The importance of labor cost on the entire cost structure varies from industry to industry, depending on the proportion of labor cost to total cost. In 1939, for example, wages made up only 5 percent of the total value of products for petroleum refining but 36 percent for full-fashioned hosiery. It is obvious that any specified change in unit labor cost would have a much less significant effect on total costs in petroleum refining than in hosiery. Of course, it must also be recognized that a change in unit labor cost for one industry (for example, coal mining) may result in changes in the cost of materials for other industries (for example, steel and electric utilities).

Table 4 shows indexes of unit labor cost for those manufacturing and nonmanufacturing industries for which data are available. In most of the 32 manufacturing industries, unit labor cost increased from 1940 through 1944. There were substantial increases in wage rates and a general lengthening of the workweek to 48 hours, with premium payment for the hours over 40. A reversal of trend is apparent in 1945, for in that year unit labor cost declined in 11 industries, despite higher wage levels in all the industries. Since there was sub-

stantial variation among different industries in the extent of changes in both average hourly earnings and output per man-hour, there is a wide dispersion in the changes in unit labor cost between 1939 and 1945. In two industries, unit labor cost in 1945 was below the 1939 level. In others, the increase in unit labor cost from 1939 to 1945 ranged up to 80 percent.

In the mining industries, the wartime increases in unit labor cost were generally smaller than in manufacturing. While average hourly earnings were substantially higher than in 1939, man-hour output was also greater. In iron mining, unit labor cost in 1945 was only 18 percent greater than in 1939; in coal mining and copper mining, wage payments per unit of output rose approximately one-third over the same period. The largest wartime increase in unit labor cost is shown for lead-and-zinc mining—67 percent from 1939 to 1945—where there was no gain in productivity.

In both railroad transportation and electric light and power there were large gains in output per man-hour and smaller increases in average hourly earnings than occurred in most manufacturing industries. As a result, unit labor cost declined in both industries. In railroad transportation, unit labor cost fell 17 percent from 1939 to 1943. Reduced productivity and increased hourly earnings resulted in some rise thereafter, but unit labor cost in 1945 remained 5 percent below the 1939 level. The decline in unit labor cost was even more marked for electric power. In 1945, wage payments made per kilowatt-hour of electric energy distributed were 28 percent lower than in 1939.

It is to be emphasized that the significance of unit labor cost change cannot be judged without references to other economic changes. One important comparison is that between unit labor cost (the amount paid for labor per unit of product) and prices (the amount received per unit of product). In the limited number of industries where data are available, there is no evidence to suggest that increases in unit labor cost overbalanced price adjustments in the war period, a conclusion buttressed by the substantial profits reported by all branches of industry.

It is obvious that changes in unit labor cost, as in other cost factors, have an influence on prices. However, it is important to recognize that changes in price levels do not always originate in response to changes in costs. The impetus for price changes may arise in other economic conditions, particularly changes in supply-demand relations. Moreover, the relationship between unit labor cost and prices is a reciprocal one. Increases in unit labor cost may result in increases in prices. But increases in prices, through their effect on the cost of living, may result in higher wage rates and increases in unit labor cost.



TABLE 4.—*Indexes of Unit Labor Cost in Selected Industries*<sup>1</sup>

[1939=100]

Industry	Unit labor cost					
	1940	1941	1942	1943	1944	1945
<i>Manufacturing</i>						
Beet-sugar refining.....	101.9	117.4	144.3	190.2	183.5	181.7
Boots and shoes.....	98.2	102.6	119.9	130.8	146.9	150.8
Bread and other bakery products.....	98.2	102.9	110.6	114.0	122.9	114.4
Cane-sugar refining.....	98.2	92.9	141.4	139.6	137.4	146.7
Canned and preserved fruits and vegetables.....	97.6	105.8	115.7	137.9	147.8	150.8
Canned and cured fish.....	81.0	93.0	134.1	146.1	154.6	156.6
Cement.....	99.4	98.4	104.8	130.3	152.0	146.9
Clay-construction products.....	90.8	94.3	111.7	147.8	151.0	149.9
Condensed and evaporated milk.....	90.9	89.9	110.4	130.7	134.2	131.8
Confectionery.....	96.1	101.1	117.2	127.4	127.8	135.4
Cotton goods.....	103.3	116.2	135.8	150.5	161.1	174.4
Fertilizers.....	95.7	105.4	132.1	150.8	159.5	160.8
Flour and other grain mill products.....	101.4	106.4	126.8	156.9	166.2	160.3
Glass products.....	103.7	106.1	114.3	115.9	123.3	112.1
Hosiery.....	95.7	96.7	102.7	109.0	112.4	112.5
Ice cream.....	96.3	84.7	79.5	91.6	92.0	95.1
Leather.....	101.3	101.8	110.2	123.9	127.8	132.0
Lumber and timber products—Sawmills.....	94.9	110.3	137.6	162.7	175.1	175.1
Malt liquors.....	104.4	103.6	110.2	124.3	130.6	136.5
Newspaper and periodical printing and publishing.....	98.6	98.5	103.6	112.3	135.9	140.4
Nonferrous metals—Primary smelters and refineries.....	95.3	111.5	127.4	143.3	151.4	155.9
Paints and varnishes.....	103.2	97.3	111.5	117.5	117.2	115.5
Paper and pulp.....	99.4	106.2	124.8	143.4	152.1	152.9
Petroleum refining.....	97.8	99.7	116.1	134.2	138.3	143.7
Rayon and allied products.....	92.2	89.2	90.1	100.5	90.7	97.2
Slaughtering and meat packing.....	98.1	107.8	123.3	131.9	132.7	125.4
Cigars.....	103.4	108.4	118.2	135.9	139.3	133.0
Cigarettes.....	105.2	103.5	111.7	113.1	117.8	119.3
Chewing and smoking tobacco and snuff.....	100.6	102.0	121.4	137.6	151.7	160.0
Woolen and worsted goods.....			141.7	146.5	140.5	144.3
<i>Nonmanufacturing</i>						
<i>Mining:</i>						
Bituminous coal.....	96.7	107.5	114.8	126.4	131.7	132.3
Anthracite.....	98.4	100.1	110.9	120.7	123.4	134.5
Iron ore.....	85.3	95.7	109.1	127.0	118.9	118.0
Copper—Recoverable metal.....	101.5	114.1	128.2	141.9	133.7	134.3
Lead and zinc—Recoverable metal.....	109.1	119.2	151.2	172.7	167.2	166.6
<i>Steam railroad transportation:</i>						
Revenue traffic.....	95.4	90.8	82.8	83.1	88.6	95.2
Electric light and power.....	93.7	85.9	78.1	65.9	66.1	71.6

<sup>1</sup> See footnotes to tables 2 and 3.

### Significance of Productivity Changes

Substantial increases in man-hour output will probably occur throughout industry during the coming years. This process of gradual improvement of productive efficiency will, as in the past, have repercussions on the entire economy. If unemployment is avoided, it will be possible to produce greater quantities of goods and services than ever before and to raise living standards substantially.

Output per man-hour, together with average hourly earnings, determines unit labor cost—the wage payments made per unit of output. If average hourly earnings remain unchanged, unit labor cost is reduced as productivity is increased, and prices can be reduced without any decline in profits. Where there is competition, it is likely that savings in labor cost made possible by productivity

increases will be reflected in lower prices, which benefit all consumers. If effective competition does not exist, however, and if average hourly earnings are not increased, the result of gains in productivity may be an increase in profits.

Workers benefit through price declines, together with all other consumers. A more direct way in which workers share the benefits of productivity gains is by means of wage increases. As output per man-hour increases, average hourly earnings may also increase without any increase in unit labor cost and without any upward pressure on prices or any reduction in profits. In 1939, unit labor cost in manufacturing industries was 44 percent lower than in 1919 and wholesale prices of manufactured goods, 38 percent lower. Average hourly earnings, on the other hand, were 28 percent higher. The basis for the wage increases and the declines in unit labor cost and prices was the large rise in output per man-hour.

The gains in living standards made possible by productivity advance will be realized only if employment is maintained. Assuming that average weekly hours remain unchanged, this means that production and demand must increase year after year at a rate sufficiently great to accommodate both the increase in the size of the labor force and the rise in productivity. It is sometimes argued that advancing productivity in itself will make it more difficult to achieve the desired volume of demand. Much depends, however, on the types of productivity changes and on the adjustments to those changes. If inflation can be avoided during the coming period, the economy should be in a relatively favorable position to absorb substantial productivity advances. The backlog of savings, the demand for consumer durable goods, and accumulated needs for equipment are important current factors. The challenge may be whether the economy can adjust itself to increasing productivity, without suffering unemployment, once war-accumulated demands are exhausted. If we are successful in solving the problem of employment, advance in productive efficiency can provide the basis for steady improvements in the level of living.

## The Physically Impaired Worker in Industry<sup>1</sup>

THROUGHOUT the United States, during the week of October 6, 1946, press and radio carried stories certifying to the successful utilization of physically impaired workers in industrial occupations. The fact that it was found desirable to resort to this national drive by means of an "Employ the Physically Handicapped Week" was strong indication that, in spite of known labor shortages, persons with serious physical impairments were finding it difficult to obtain employment.

Before the war, many industrial establishments refused employment to impaired workers. By means of preemployment physical examinations, the "undesirables" were weeded out. For various reasons, a large portion of industrial management insisted on hiring only the physically sound.

During the stringent wartime manpower shortage, many of these exclusion policies were relaxed, and workers who under ordinary conditions would have been refused employment were given jobs. In some plants these workers staffed entire assembly lines. As subsequent events proved, however, their employment was frequently regarded as an emergency measure at a time when industry was scraping the bottom of the manpower barrel. When the emergency was over, the need for their service disappeared. Either their jobs vanished during reconversion or they were replaced by able-bodied workers. Even in plants which had no specific exclusion policies, they were among the first to be fired because they had been among the last to be hired.

A considerable number of establishments that employed impaired persons before the war found them to be good workers—provided they were so placed that their impairments were not handicaps. Many establishments that had refused to employ such workers before the war satisfied themselves during the war that this technique resulted in acceptable and frequently superior performances. But many others reverted to their earlier practices. Still others did not relax their hiring policies even during the war.

### *How Many Impaired Workers?*

How many seriously impaired workers are there? No one knows. The figures used publicly vary all the way from 5 million to 28 million.

It is of interest, however, that as of August 31, 1946, the U. S. Employment Service had on hand a backlog of 215,331 applications from disabled veterans whom it had not yet placed in industrial employment. At the rate at which these veterans had been placed between April and August of 1946—about 11,000 per month—it would take nearly 20 months to place this backlog. Between September

<sup>1</sup> Prepared by Max D. Kossoris and Henry S. Hammond of the Bureau's Industrial Hazards Division.



1945 and March 1946, placements averaged only between 7,000 and 8,000 per month.

About 100,000 impaired veterans of World War I are now receiving rehabilitation under the GI Bill of Rights. A similar number of nonveterans are being supplied with vocational rehabilitation training. The total number of veterans with serious impairments is considerably in excess of 100,000, and, by general admission, the 100,000 nonveterans receiving rehabilitation training is only a small fraction of the number requiring rehabilitation. Many seriously impaired persons, however, do not require retraining, let alone rehabilitation.

In the light of available estimates of the number of persons with serious physical impairments—totaling about 16 million or more—an estimate of about 5 to 7 million impaired workers who could be placed in industrial occupations does not appear unreasonable. This excludes the old and the young, as well as persons who would not normally be available for the labor market. But again, we do not know how many are now employed and how many more could be employed.

A large segment of industry does not want to employ the physically impaired, and frequently cites these reasons for its position: The impaired are less efficient than the able-bodied; it is more difficult to transfer them from one job to another; they are more likely to lose time because of illness; they are more difficult to place satisfactorily; they are more likely to be hurt; their employment involves hazards to their fellow employees; they increase the cost of workmen's compensation.

### *Inquiry as to Performance*

To what extent is industry justified in discriminating against the impaired worker?

At the request of the Veterans Administration, the Bureau of Labor Statistics undertook to appraise the work performances of about 10,000 seriously impaired workers. Capitalizing the fact that impaired persons had found employment during the war period as never before and that many of them were still at work, the Bureau studied the performance records of these workers in manufacturing industries.

A committee of industrial physicians assisted in defining 10 specific types of physical impairments which were regarded to be so severe that they would raise serious difficulties for those seeking employment. Included were orthopedic impairments, such as the loss or severe limitation of use of an arm, leg, hand, or foot; partial or complete blindness; partial or complete deafness; severe deformity of the spine; arrested tuberculosis; compensated cardiacs; peptic ulcers; and epilepsy. An advisory committee (which, in addition to the industrial physicians, included members of industry and of labor organizations,

placement counselors, and other persons deeply interested in the problem) went over the proposed program carefully and assisted in the development of the scope, purpose, and methodology of the survey.

The theory basic to the survey may be summarized briefly as follows: To justify his employment per se, in competition with "normal" workers, the impaired worker must demonstrate that he can hold his own. As a matter of intelligent placement policy, a worker should be placed on the basis of his capacity and ability, and these should be adequate to meet the requirements of the job he is to fill. If a job requires the use of two good arms and not the use of legs—or the use of only one leg—then the fact that the worker has only one leg is immaterial. In other words, his impairment would not be a disadvantage to him in competition with other workers.

Proof as to whether or not impaired workers, intelligently placed, were efficient, were absent no more than others, and were no greater accident risks, was to be supplied by industry's own records. All findings were to be based on objective measurements, which in turn were to be based on data taken from production records, attendance records, injury records, and turn-over records. Subjective reactions, opinions, and testimonials were to be taken into account, but would not be permitted to influence the statistical measurements. The record should speak for itself.

To rule out as many variables as possible, each impaired worker selected from the medical records as falling within one of the defined groups of impairments was matched against 2, sometimes 3, unimpaired workers of about the same age, sex, and work experience, on the same shift, and performing the same job in the same department of the plant. Thus, the only basic difference between the impaired worker and his unimpaired coworkers against whom he was matched would be the factor of impairment. The ultimate measurements, of course, would have to be evaluated in the light of the placement practices and the work environment of each plant studied.

### *Preliminary Findings*

*Work performance.*—By August 1, the performances of about 4,000 impaired workers and 6,500 unimpaired workers had been surveyed, in 47 plants engaged in a wide variety of industrial activities. While the number falling into any one impairment group was not large enough to offer adequate data for that group, the experience of the entire group of over 10,000 workers permits a fairly reasonable evaluation of some of the employer opinions cited earlier.

As a group, the impaired were 2 percent more productive than the unimpaired. This does not mean, of course, that every impaired worker is a good worker; but neither is every unimpaired worker a good worker. On the average, the impaired workers held their own.

An analysis of the detailed data showed that 34 percent of the impaired were better than the unimpaired in the corresponding control group, 36 percent were as good, and 29 percent were poorer workers. Thus, 70 percent were as good or better.

*Absenteeism* rates of the two groups were identical. Each lost 3.8 percent of scheduled working hours. Nor did the Bureau find any significant differences among the types of absenteeism. The rates, by reasons of absence (illness, personal business, transportation difficulties, etc.), did not vary between the two groups by more than two-tenths of 1 percent. Although the data were not adequate at this stage to permit conclusions as to any one type of impairment, it was surprising to find that neither cardiac nor extubercular workers had lost any more time from work than had their fellow workers with whom they were matched.

*Injury experience.*—One of the most serious objections to the employment of impaired workers is that they are greater accident risks than are the unimpaired. This objection takes three forms: (1) the impaired worker is more likely to be injured, (2) he is a menace to others, and (3) if he is injured, the workmen's compensation cost is greater because the injury is superimposed on an existing disability or can aggravate the existing disability.

To obtain as comprehensive a comparison as possible, both disabling and nondisabling injuries were studied. In first-aid injuries per million hours worked, 1,228 were reported for impaired workers, as against 1,206 for the unimpaired—a difference of 22 in slightly over 1,200 injuries. But the amazing finding was that, in disabling injuries per million employee-hours, the impaired averaged only 8.3 as against 11.8 for the unimpaired. In other words, the accident record of the so-called "normal group," doing exactly the same work, and exposed to the identical work hazards, was about 40 percent worse. One obvious explanation for this finding is that, having a serious disability, the impaired workers are more careful not to get hurt again. The comment of one plant manager is worth quoting: "Take a look at my shop. The impaired workers aren't engaged in horseplay and chasing one another with air hoses. It's the unimpaired guys who do that sort of stuff and end up in the dispensary."

In none of the 47 plants studied did the Bureau find a single instance in which the existing impairment was a causal factor in an injury to the impaired worker, or in which an injury, when added to the existing impairment, resulted in permanent total disability. Nor was a single instance found in which an impairment was a causal factor in the work injury of an unimpaired worker. As to the question whether the injury aggravated the existing disability so as to result in higher workmen's compensation costs, the available data on injury cost were not tabulated. (They will be when the entire survey has been completed.)



The data revealed, however, that there was very little difference in average time lost per injury between the two groups.

*Medical examinations.*—All the 47 plants studied used medical examinations for their employees. As a matter of fact, plants which had no such examinations could not be studied because of the obvious difficulty of ascertaining the type and severity of impairments. But the character of the examinations varied widely, from the cursory type to the very exhaustive type including X-rays and a variety of laboratory tests.

Very significant is the fact that several hundred other plants which had impaired employees could not be surveyed because they had no medical records and did not use medical examinations as part of their employment practices. It is not necessary, of course, that each plant have a medical department. That is plainly impracticable for small and for many medium-sized plants. But the fact that they lack medical records raises the questions of how such plants may be aware of an applicant's impairment if it is not readily apparent, and how such applicants can be placed at jobs in which their impairments will not be handicaps. As far as it had gone, the survey indicated that the plants with inadequate medical examinations and without adequate placement methods and job-requirement analyses—these characteristics frequently went together—did not fare as well as the other plants in the utilization of the impaired workers.

*Exclusion rules.*—Among the 47 plants surveyed, exclusion rules varied widely. Only three plants had no rules of this kind. At the other extreme, one plant refused employment to persons with epileptic, diabetic, ex-tubercular, cardiac, hernia, and vision disabilities. The other 43 plants had exclusion rules somewhere between these extremes—but they had them. Such rules, of course, applied only to new applicants. Consequently the impairments which would have barred new applicants frequently were found among the plant's own employees; but in these cases the disabilities had developed subsequent to the workers' entering into service in the plant.

It was found, too, that the exclusion rules were not always strictly observed. Conversely, however, instances were found in which applicants were barred from employment even though there were no specific rules for their exclusion.

A considerable number of plants had tightened their exclusion rules since VJ-day, and at the time of the survey were unwilling to accept some of the impairment types which they had accepted during the war. As a result, some plants which had used impaired workers in sizable numbers during the war had very few such workers on their pay rolls at the time of the survey. In certain instances, of course, this was the result of a reduction in force, the impaired workers having been laid off first because they were the last to be hired. But

in many plants the reduction was the direct result of tighter exclusion rules. The emergency was over.

*Placement practices.*—The survey disclosed great variations in placement practices. Matching the man to the job is far from general in industry. Only a few of the plants surveyed made use of comprehensive analyses of jobs and job requirements, not only as related to impaired workers, but as a tool toward the adequate placement of all workers. Some plants left decisions concerning the placement entirely up to the foreman. If the impaired worker made out satisfactorily, that was fine; if not, he was shifted to another job or was discharged. Between these extremes, placement practices varied widely. One of the more dramatic instances involved a man who handled steel drums with hooks attached to two artificial arms—and did a good job.

It is important also to note that in the plants surveyed, which obviously were more sympathetic to the employment of impaired workers and were satisfied that they were desirable employees, the impaired workers constituted only about 5 percent of the total force. There is no reason to believe that, for industry generally, the percentage would be that high.

Specialists in rehabilitation and retraining believe that if the impaired are to be utilized on the basis of what they can do—and can do well enough to hold their own in the competition for jobs—industry must be convinced that it is good business to employ them. It is not enough, they believe, to give the impaired workers jobs which they can perform, if they cannot do them well. Nor does it seem desirable to them to reserve for these workers the jobs of watchmen, janitors, or elevator operators. Few of the impaired workers, particularly the veterans, want charity. They want to find their places as useful and respected members of the community. Whether they are afforded that opportunity depends on whether industry will accept the policy of hiring them for what they can do well in place of rejecting them because of what they cannot do.

## Veterans Return to the Nation's Factories<sup>1</sup>

THIS study is primarily concerned with veterans in manufacturing industries. It is an attempt to answer questions such as these: Which industries employ most of the veterans? Do veterans shift about from industry to industry, quitting job after job? What is the attitude of employers in the matter of discharging or laying off veterans, whether newly hired or reinstated on preservice jobs? Monthly reports on the job experience of veterans in manufacturing covering hires, lay-offs, and quits, submitted to the Bureau of Labor Statistics by some 6,500 employers, employing more than 3½ million workers, form the basis of the present analysis.

### *Which Industries Employ Most Veterans?*

The trend in employment of veterans of World War II in manufacturing industries between December 1945 and July 1946 was characterized by continuous gains. Despite the temporary declines during this period in general factory employment owing to shortages of materials, major labor disputes in basic industries, and seasonal factors, veteran employment doubled over the period, rising from 1.2 million in December to 2.6 million in July. (See table 1.)

The increasing importance of returned veterans in the industrial life of the Nation is demonstrated in the manufacturing industries by the changing ratio of veterans to all employees. In December 1945, veterans were 9.3 percent of all factory employees but in July they constituted 18.4 percent. Veterans comprised 10.4 percent of all employees in the durable-goods industries and 8.2 percent in the non-durable groups in December. The comparable percentages in July 1946 were 21.8 and 14.6. (See table 2.)

Veterans constituted fewer than 15 percent of all employees in December 1945 in all the 19 major groups shown in table 2. However, in July 1946, at least 17 percent of the employees in 14 of the major groups were veterans, and in 10 of these groups the proportion was above 20 percent. Only in the 4 low-wage industry groups, which traditionally employed large numbers of women, was the proportion of veterans to all employees consistently low (apparel, tobacco, textiles, and leather). However, less than 10 percent of all veterans in manufacturing were engaged in these industrial groups.

Although veteran employment continued to increase from December 1945 through July 1946, the distribution of veterans in the two large component divisions of manufacturing remained substantially the same. From 51 to 59 percent of the veterans were employed in the

<sup>1</sup> Prepared in the Employment Statistics Division by Ella Joan Polinsky under the direction of Clara F. Schloss.



durable-goods industries over the period. However, this apparent stability should not obscure the moderate but steady tendency for veterans to shift from employment in the nondurable-goods industries into the durable-goods groups.

TABLE 1.—*Percentage Distribution of Veterans in Manufacturing Industries by Major Industry Group, December 1945–July 1946*<sup>1</sup>

Industry group	Percentage distribution of veterans							
	Dec. 1945	Jan. 1946	Feb. 1946	Mar. 1946	Apr. 1946	May 1946	June 1946	July 1946
Estimated number of veterans (in thousands).....	1, 216	1, 497	1, 632	1, 952	2, 210	2, 385	2, 462	2, 611
All manufacturing, total.....	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Durable goods.....	53. 8	55. 4	51. 3	55. 1	57. 6	59. 2	58. 9	59. 1
Nondurable goods.....	46. 2	44. 6	48. 7	44. 9	42. 4	40. 8	41. 1	40. 9
<i>Durable goods</i>								
Iron and steel and their products.....	14. 5	13. 8	10. 1	14. 6	14. 5	14. 4	14. 4	14. 3
Electrical machinery.....	4. 9	4. 9	3. 8	3. 8	4. 5	4. 9	5. 1	5. 0
Machinery, except electrical.....	10. 7	11. 4	10. 8	10. 7	10. 9	11. 1	11. 4	11. 3
Transportation equipment, except automobiles.....	5. 5	5. 3	5. 3	5. 1	5. 3	5. 1	5. 3	5. 2
Automobiles.....	5. 0	5. 9	6. 0	6. 2	7. 9	9. 3	8. 2	8. 9
Nonferrous metals and their products.....	3. 2	3. 4	3. 1	3. 2	3. 2	3. 3	3. 3	3. 3
Lumber and timber basic products.....	3. 7	3. 9	4. 3	4. 1	4. 2	4. 1	4. 1	4. 1
Furniture and finished lumber products.....	3. 2	3. 4	3. 8	3. 6	3. 4	3. 3	3. 3	3. 3
Stone, clay, and glass products.....	3. 1	3. 4	4. 1	3. 8	3. 7	3. 7	3. 8	3. 7
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	5. 7	5. 8	6. 6	6. 2	6. 0	5. 8	5. 8	5. 6
Apparel and other finished textile products.....	1. 9	1. 6	2. 1	2. 0	1. 7	1. 6	1. 6	1. 7
Leather and leather products.....	2. 0	2. 0	2. 1	1. 9	1. 8	1. 8	1. 8	1. 7
Food.....	12. 2	11. 3	12. 2	10. 7	9. 8	9. 3	9. 2	9. 8
Tobacco manufactures.....	. 3	. 3	. 3	. 3	. 3	. 3	. 3	. 3
Paper and allied products.....	4. 0	3. 8	4. 5	4. 1	3. 9	3. 7	3. 7	3. 6
Chemicals and allied products.....	6. 8	6. 6	6. 9	6. 4	6. 0	5. 7	5. 8	5. 6
Products of petroleum and coal.....	2. 3	2. 2	2. 2	2. 1	2. 0	2. 0	2. 0	2. 0
Rubber products.....	2. 5	2. 5	2. 7	2. 5	2. 4	2. 3	2. 3	2. 2
Printing, publishing, and allied industries.....	4. 5	4. 5	4. 8	4. 7	4. 5	4. 4	4. 5	4. 4
Miscellaneous industries.....	4. 0	4. 0	4. 3	4. 0	4. 0	3. 9	4. 1	4. 0

<sup>1</sup> Based on data collected monthly from some 6,500 reporters employing approximately 3.5 million workers.

<sup>2</sup> Includes some ordnance in December only.

Closer inspection of the component industry groups shows that some important shifts occurred, although the distribution of veterans remained fairly constant over the 8-month period. In December 1945—when a little over 1 million veterans were employed in manufacturing as a whole—only 5 percent were employed in the automobile industry. By July—when veteran employment in manufacturing rose to 2.6 million—about 9 percent of the total were working in automobile plants. Also, proportionately fewer veterans were employed in the highly seasonal food industries and in the chemical groups in the last 4 months of the period studied than in the first 4 months.

Except in February when the industry was strike-bound, the iron and steel group ranked as the largest industrial employer of veterans over the entire period from December 1945 to July 1946. Although the proportion of veterans to all employees in iron and steel doubled over the period, the percentage of veterans employed in this group

remained fairly stable in respect to the estimated number of veterans in all manufacturing (around 14 percent).

In large measure, employment opportunities for veterans were better in those industries in which average weekly earnings exceeded \$40. About half of the veterans in manufacturing were employed in 8 major industry groups in which weekly earnings averaged \$45 or better over the entire 8-month period (iron and steel, machinery except electrical, transportation equipment, automobiles, nonferrous metals, petroleum products, rubber products, and printing and publishing). In December, only about 2 percent of all veterans were employed in industry groups in which earnings averaged over \$50 a week (petroleum and coal products), but in July 1946, over a third of all veterans on factory pay rolls were in such industry groups.<sup>2</sup>

TABLE 2.—*Veterans as Percent of All Factory Employees, December 1945–July 1946*<sup>1</sup>

Industry group	Percent veterans of all employees							
	Dec. 1945 <sup>2</sup>	Jan. 1946	Feb. 1946	Mar. 1946	Apr. 1946	May 1946	June 1946	July 1946
All manufacturing.....	9.3	11.3	13.0	14.8	16.0	17.1	17.4	18.4
Durable goods.....	10.4	12.9	14.9	17.4	19.0	20.4	20.7	21.8
Nondurable goods.....	8.2	9.7	11.3	12.3	13.0	13.5	13.9	14.6
<i>Durable goods</i>								
Iron and steel and their products.....	11.6	13.4	15.0	18.9	20.3	22.0	22.2	22.9
Electrical machinery.....	9.0	11.3	13.2	14.8	16.9	17.8	18.8	19.5
Machinery, except electrical.....	10.9	13.7	15.7	17.8	19.3	20.6	21.3	22.1
Transportation equipment, except automobiles.....	9.4	11.7	14.1	16.6	18.5	19.6	21.4	22.8
Automobiles.....	12.5	16.7	18.3	21.2	22.5	26.1	24.6	27.0
Nonferrous metals and their products.....	9.7	12.7	14.5	16.7	18.0	19.2	19.3	20.2
Lumber and timber basic products.....	8.2	10.3	12.2	13.3	14.9	15.4	15.4	15.9
Furniture and finished lumber products.....	9.5	12.0	14.6	16.2	17.3	18.1	18.2	19.2
Stone, clay, and glass products.....	10.0	12.9	15.9	17.2	18.6	19.8	20.5	21.2
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	5.7	7.1	8.6	9.5	10.3	10.8	11.0	11.4
Apparel and other finished textile products.....	2.2	2.2	3.0	3.4	3.3	3.4	3.4	4.0
Leather and leather products.....	6.6	8.0	8.9	9.6	10.1	10.7	10.9	11.2
Food.....	10.2	11.8	13.8	14.6	15.2	15.7	16.0	17.1
Tobacco manufactures.....	3.5	4.4	5.9	6.5	6.3	7.1	7.3	7.3
Paper and allied products.....	11.8	13.9	17.4	18.6	19.8	20.2	20.9	21.8
Chemicals and allied products.....	13.1	15.7	17.7	19.6	20.5	21.7	22.6	23.5
Products of petroleum and coal.....	14.4	16.6	18.5	19.9	21.4	22.3	23.1	24.1
Rubber products.....	12.2	14.6	16.6	17.9	19.3	19.9	20.6	21.2
Miscellaneous industries.....	10.2	12.2	13.9	15.4	16.9	17.8	18.8	19.2

<sup>1</sup> Based on data collected monthly from some 6,500 reporters employing approximately 3.5 million workers.

<sup>2</sup> Veterans also comprised 9.6 percent of all employees in ordinance.

A considerable number of veterans were also employed in six industry groups having average weekly earnings of less than \$40 throughout the period (lumber, furniture, textiles, apparel, leather, and tobacco). About 17 percent of all veterans in manufacturing were so employed in December 1945. By July 1946, despite the doubling of veteran employment in these groups, the ratio to all veterans employed remained unchanged (under 17 percent). Average weekly earnings increased even in these low-wage industries over the period studied,

<sup>3</sup> As reports from cooperating firms utilized in this analysis do not give separate data on earnings of veterans the published monthly series on average earnings and hours of all production workers in manufacturing industries has been used as an indication of veterans' earnings throughout this study.

generally accompanied by a drop in the hours worked. (See tables 1 and 2.)

A special tabulation for the month of July shows veterans as a percent of all employees in 64 manufacturing industries.<sup>3</sup> Veterans comprised 1 out of every 5 employees in 35 industries and 1 out of every 6 employees in 15 additional industries. Average weekly earnings in about half the industries for which veteran employment was tabulated ranged from \$46.01 (electrical equipment) to \$57.02 (petroleum refining), and in these industries veterans accounted for more than 18 percent of all employees. (See table 6.)

Only in 10 industries which employed large numbers of women were veterans less than 15 percent of all employees. Except in the woolen and worsted industry and in rubber footwear (with veterans more than 13 percent of all employees), average weekly earnings in this group of industries followed the lower wage pattern characteristic of industries in which women predominate.

### *Turn-Over Among Veterans*

Over-all employment alone, is not a sufficiently sensitive guide to gauge the reabsorption and readjustment of veterans to the industrial life of the Nation. Turn-over must also be carefully scrutinized from the standpoint of the special problems confronting veterans. The two main components of turn-over—accessions and separations—are analyzed separately to obtain a clearer picture of how veterans are getting on in industry.

### *Veteran Hires*

In the earlier months of the period December 1945–July 1946, veterans formed a larger proportion of the accessions in manufacturing—about 40 percent—owing chiefly to the acceleration of military discharges at the end of 1945 and in the first quarter of 1946. From May through July, veteran hires declined to a level closer to 30 percent of all monthly accessions.

Throughout the period studied, veterans comprised a greater proportion of all accessions in the durable than in the nondurable-goods industries. From December through April they constituted at least 45 percent of all hires in the durable groups as compared with a range of from 27 to 37 percent in the nondurable-goods groups. In May, when hiring was curtailed as a result of the coal strike and freight embargo, veteran accessions in the heavy goods industries still comprised 39 percent of all accessions as compared with only 23 percent in the nondurable groups. (See table 3.)

<sup>3</sup> Included are 17 of the 19 industry groups in all manufacturing. Break-down by industry is not available for tobacco and miscellaneous industries. The special tabulation is based on regular reports for July from some 6,400 cooperating firms, employing about 3.9 million workers. Data on accessions and separations of veterans by industry are compiled from the same reports. Comparable data are released monthly for major industry groups by the Bureau's Division of Employment Statistics.



### Veteran Separations

Total separation rates for veterans including quits, discharges, and lay-offs were consistently higher than for nonveterans in the 8 months, December 1945 through July 1946. Since quits represent at least three-quarters of the separations of veterans during this period, and higher quit rates are characteristic of new employees, the higher veteran separation rates should not be overemphasized.

TABLE 3.—*Veteran Accessions Compared With All Accessions in Manufacturing Industries, December 1945–July 1946*<sup>1</sup>

Industry group	Percent veteran accessions of all accessions							
	Dec. <sup>2</sup> 1945	Jan. 1946	Feb. 1946	Mar. 1946	Apr. 1946	May 1946	June 1946	July 1946
All manufacturing.....	42.1	41.5	39.8	38.4	37.1	31.7	28.2	29.1
Durable goods.....	47.0	47.7	46.2	45.1	44.6	39.2	34.0	36.2
Nondurable goods.....	37.1	34.4	34.1	30.2	27.4	23.3	20.9	20.8
<i>Durable goods</i>								
Iron and steel and their products.....	57.2	48.0	48.8	54.6	45.9	43.4	38.7	38.3
Electrical machinery.....	36.4	32.3	32.2	34.9	41.5	33.2	27.5	26.7
Machinery, except electrical.....	60.2	63.6	60.3	56.6	49.0	46.7	39.0	42.0
Transportation equipment, except automobiles.....	31.1	52.0	49.7	48.8	45.4	40.2	39.6	41.8
Automobiles.....	49.8	53.0	58.4	37.1	52.3	50.0	34.2	42.0
Nonferrous metals and their products.....	44.2	48.5	43.6	42.3	41.1	39.4	32.9	35.6
Lumber and timber basic products.....	33.4	37.9	38.0	36.3	31.5	27.2	24.6	27.2
Furniture and finished lumber products.....	33.6	38.3	42.9	38.1	37.4	29.4	31.3	31.8
Stone, clay, and glass products.....	43.2	40.5	38.8	37.5	41.7	40.7	30.9	30.0
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	27.7	27.7	27.1	23.5	21.8	18.6	16.6	15.1
Apparel and other finished textile products.....	14.9	9.5	10.3	10.1	7.2	5.4	5.2	6.3
Leather and leather products.....	29.2	27.2	23.7	21.6	19.0	15.9	11.2	11.6
Food.....	33.5	36.1	39.2	32.6	28.3	23.5	21.1	19.7
Tobacco manufactures.....	16.5	21.3	14.7	10.1	9.5	10.7	7.8	7.2
Paper and allied products.....	51.3	48.4	49.2	46.8	43.2	40.3	31.0	32.9
Chemicals and allied products.....	68.3	63.0	66.2	58.1	54.7	49.8	43.7	45.1
Products of petroleum and coal.....	76.6	82.4	81.2	74.2	68.9	60.8	62.5	65.7
Rubber products.....	53.7	49.1	47.5	45.3	44.1	41.4	38.4	41.0
Miscellaneous industries.....	51.6	48.3	40.1	40.2	42.1	36.0	31.1	30.7

<sup>1</sup> Based on data collected monthly from some 6,500 reporters employing approximately 3.5 million workers.

<sup>2</sup> Veterans also comprised 41.3 percent of accessions in ordnance in December.

Higher veteran quit rates reflect in part the problems and conflicts peculiar to this group of employees. It would be unrealistic to expect masses of men to make the transition from warfare to factory routines without some degree of shifting from job to job. Also, it is not yet known to what extent the introduction of up-to-date equipment and improved production techniques during wartime were responsible for changes in employment patterns in the postwar period. It must be recognized, however, that with job simplification to speed production and to conserve scarce labor in a war economy, the content and requirements of some jobs had undergone substantial alteration. Veterans reinstated in preservice jobs in durable-goods industries, in which such changes were greatest, were confronted with different and generally less skilled jobs.

Other factors influencing job shifts by veterans include their desire to employ various new skills and aptitudes developed during their

war service, and conversely, for some veterans, the discovery that the years of prolonged military service had impaired their peacetime skills. Special adjustment problems were posed by the younger veterans who had either never held jobs prior to military induction, or were drafted from first jobs in war plants where they had little opportunity to acquire useful peacetime skills.

On the other hand, the lower involuntary separation rates for veterans than for nonveterans may be attributed in large measure to such factors as the legal job rights of veterans, and the reluctance of industry to discharge or lay off former members of the armed forces.

The provision of the amended Selective Training and Service Act of 1940, that veterans reinstated under the act may not be discharged from their jobs for a period of 1 year after restoration, gives veterans as a group greater job security for that period, at least, than that possessed by nonveterans.

### *Do Veterans Quit Job After Job?*

Over the period December 1945–July 1946, proportionately more veterans than nonveterans quit jobs in manufacturing industries. The quit rates of veterans were consistently higher than for nonveterans, and ranged from 54 to 61 per 1,000 veterans. Although veteran quits were higher than for nonveterans, the trend over the period of these quits in all manufacturing was similar to that of nonveterans. For a period of 5 months (December 1945–April 1946) the veteran quit rate ranged from 57 (December) to 60 quits per 1,000 veterans (March and April). In May, it dropped to 54, the lowest rate in 6 months, but in July the veteran quit rate rose to 61, the highest rate for this group. The nonveteran quit rate of 41 in July was also a high point.

Since veterans are new employees, it would be more appropriate to compare their quit rates with those of new nonveteran employees rather than with all nonveterans. However, as the necessary data are not available, comparison is made instead with the quit rates in manufacturing in wartime when new employees were constantly being recruited.

If, for example, veteran quit rates of 57 per 1,000 veterans in December 1945 and 61 per 1,000 in July 1946 were compared with quit rates of all employees in the corresponding 8-month period from December 1943 to July 1944 (44 and 50 per 1,000 employees), the rates for veterans would not appear too different. If further comparison were made between veteran quit rates and those prevalent in typical war industries (such as aircraft, with quit rates of 52 per 1,000 employees in July 1943, 57 in August 1943, 61 in August 1944), the difference would appear even smaller.

Proportionately more veterans quit jobs in the durable than in the

nondurable goods component of manufacturing. The veteran quit rate in the durable-goods group varied over the period from 57 quits per 1,000 veterans in December to 69 per 1,000 in July. The quit rates in corresponding months among veterans in the nondurable-goods group were 57 and 49.

Comments are not available from employers to explain the higher veteran quit rates in the durable-goods groups; to some extent they were occasioned by the major labor disputes such as those in automobiles, steel, coal mining, and transportation. For example, while in some States persons unemployed because of labor disputes are disqualified for unemployment compensation, veterans quitting jobs in anticipation of strikes are eligible for special readjustment allowances under Federal law.<sup>4</sup>

Veterans quitting their jobs in 3 major heavy-goods groups accounted for at least 30 percent of all veteran quits over the entire period studied (iron and steel, machinery except electrical, and automobiles). Approximately another 14 percent of the veteran quits occurred in the lumber and furniture groups, which also had the highest veteran quit rates in the 8-month period. Veteran quits in the food and textile groups accounted for about half the quits in the nondurable-goods component. (See table 4.)

TABLE 4.—Quit Rates Among Veterans in Manufacturing Industries, December 1945–July 1946<sup>1</sup>

Industry group	Veteran quit rates							
	Dec. <sup>2</sup> 1945	Jan. 1946	Feb. 1946	Mar. 1946	Apr. 1946	May 1946	June 1946	July 1946
All manufacturing.....	5.7	6.0	5.7	6.0	6.0	5.4	5.4	6.1
Durable goods.....	5.7	6.1	5.6	6.0	6.3	5.6	5.8	6.9
Nondurable goods.....	5.7	6.0	5.9	5.9	5.6	5.1	4.7	4.9
<i>Durable goods</i>								
Iron and steel and their products.....	5.5	5.7	4.8	5.5	5.9	5.2	5.4	6.3
Electrical machinery.....	3.2	3.9	3.5	4.1	3.7	3.4	3.6	3.5
Machinery, except electrical.....	4.8	5.0	4.8	5.1	5.4	4.5	4.4	5.3
Transportation equipment, except automobiles.....	5.3	7.6	6.1	6.1	5.2	5.7	5.6	5.7
Automobiles.....	5.3	4.7	3.5	4.3	6.6	4.7	5.5	8.6
Nonferrous metals and their products.....	6.1	7.2	6.3	6.7	5.8	6.2	5.9	6.7
Lumber and timber basic products.....	10.2	9.9	9.0	10.3	11.1	11.9	11.4	12.3
Furniture and finished lumber products.....	10.0	9.7	9.8	11.6	11.6	9.8	9.8	11.1
Stone, clay, glass, and their products.....	5.4	5.5	4.6	4.9	6.0	5.4	6.0	7.0
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	5.6	6.8	6.8	6.9	6.5	6.4	5.6	6.0
Apparel and other finished textile products.....	1.8	4.5	4.6	7.8	5.5	5.1	4.8	4.7
Leather and leather products.....	3.6	4.4	4.2	5.0	4.5	3.8	3.0	3.7
Food.....	8.4	7.7	8.6	7.3	6.7	5.5	5.1	5.1
Tobacco manufactures.....	6.8	6.7	4.1	2.6	4.3	3.6	3.1	5.3
Paper and allied products.....	6.2	8.0	6.1	8.0	8.2	7.7	6.5	7.0
Chemicals and allied products.....	3.6	4.2	3.7	3.8	3.9	3.7	3.7	3.8
Products of petroleum and coal.....	2.7	3.5	2.0	2.4	2.3	2.2	2.5	2.6
Rubber products.....	9.0	7.2	6.6	6.2	5.8	5.4	5.4	6.1
Miscellaneous industries.....	2.6	3.0	3.0	3.4	4.1	3.7	3.8	4.0
Nonveterans—All manufacturing.....	3.7	4.0	3.5	3.9	3.9	3.8	3.6	4.1

<sup>1</sup> Based on data collected from some 6,500 reporters employing approximately 3.5 million workers.

<sup>2</sup> Veteran quits in ordinance included in December only.

<sup>4</sup> See Protection of Veterans' Unemployment Benefits During Work Stoppages in New York, in Monthly Labor Review, May 1946, (p. 758), for an example of a State law.



Quit rates were obtained for nonveterans in the 10 selected industry groups in which two-thirds of all veterans in manufacturing were employed in July 1946. Veteran quit rates were higher than for nonveterans in all of the groups. In 4 groups, veteran quit rates were practically double the rates for nonveterans (iron and steel, machinery except electrical, lumber, and rubber). In the petroleum products group, the rate of 26 quits per 1,000 veterans was almost treble the rate of 9 quits per 1,000 nonveterans. Only in food and textiles were the rates for veterans less than 25 percent above those for nonveterans.

A special tabulation of the quit rates of veterans in all 64 industries in the sample is given in table 6. Veteran quit rates in the 42 durable-goods industries ranged from 16 per 1,000 (communication equipment) to 144 (sawmills). In the 22 nondurable-goods industries, veteran quit rates were considerably lower, ranging from 11 per 1,000 veterans (full-fashioned hosiery) to 81 (cotton).

The rate in cotton, of 81 veteran quits for every 1,000 veterans employed in the industry, was the highest in all nondurable-goods industries and was also above the rates for veterans in three-fourths of the durable-goods industries.

### *Are Veterans Being Fired?*

Proportionately fewer veterans than nonveterans were discharged or laid off in the 8-month period, reflecting in large measure the cooperation of employers in keeping veterans on industry pay rolls. In December 1945, when 10 out of every 1,000 veterans were involuntarily separated, the corresponding rate for nonveterans was double. However, in July 1946, when the veteran rate was 11 per 1,000—the lowest involuntary separation rate since December 1945—the corresponding rate for nonveterans was only slightly higher (12 per 1,000 nonveterans).

The involuntary separation rates of veterans approximated those for nonveterans in July partly because of the "superseniority" decision of the United States Supreme Court.<sup>5</sup> According to the decision, the year's guaranty against discharge without cause (under the Selective Training and Service Act) protects the veteran against lay-off only within the established seniority system. It does not extend to veterans preference over nonveterans with greater job seniority. Despite various preferences extended to ex-GI's, veterans as a comparatively younger group in the labor force than persons past military age, have in many cases been unable to accumulate job seniority equal to that of nonveterans.

<sup>5</sup> See decision (May 27, 1946) on "superseniority" of veterans in *Fishgold v. Sullivan Drydock and Repair Corp.*, in *Monthly Labor Review*, July 1946 (p. 98). For background of this case, see also issues of *Monthly Labor Review* November 1945 (p. 993), May 1946 (p. 760), June 1946 (p. 920). For other decisions on seniority rights of veterans see: *Olin Industries, Inc. v. Barnett et al.*, *Monthly Labor Review*, April 1946 (p. 618); *Droste v. Nash-Kelvinator Corp. et al.*, *Monthly Labor Review*, April 1946 (p. 619); *Whirls v. Trailmobile Co.*, *Monthly Labor Review*, March 1946 (p. 437) and June 1946 (p. 919).

Over the period studied, between 60 and 75 percent of all the lay-offs and discharges of veterans occurred in the heavy industry group. Approximately 50 to 60 percent of these separations took place in four major durable-goods groups which reported basic raw material shortages in some of the months; i. e., iron and steel, machinery except electrical, transportation equipment, and automobiles.

In the nondurable-goods component from February through July, the food industry accounted for about half of the veterans fired or laid off. In June 1946, the lay-off and discharge rate for veterans was 44 per 1,000 which resulted largely from livestock shortages and uncertainty as to the fate of price control of meat. The corresponding rate for nonveterans in June was 63 per 1,000. (See table 5.)

TABLE 5.—*Involuntary Separation Rate of Veterans in Manufacturing Industries, December 1945–July 1946*<sup>1</sup>

Industry group	Veteran involuntary separation rates							
	Dec. <sup>2</sup> 1945	Jan. 1946	Feb. 1946	Mar. 1946	Apr. 1946	May 1946	June 1946	July 1946
All manufacturing.....	1.0	2.0	1.7	1.9	1.7	1.7	1.6	1.1
Durable goods.....	1.3	2.5	2.1	1.9	1.8	2.0	1.6	1.2
Nondurable goods.....	.6	1.1	1.2	1.9	1.5	1.2	1.6	.9
<i>Durable goods</i>								
Iron and steel and their products.....	.7	4.2	1.3	1.2	.9	.9	.9	.8
Electrical machinery.....	.7	1.6	1.6	1.2	1.0	1.1	1.3	.8
Machinery, except electrical.....	.7	1.3	1.8	1.2	1.1	1.4	1.2	.6
Transportation equipment except automobiles.....	4.5	5.1	4.9	6.5	6.3	7.2	4.7	3.2
Automobiles.....	2.5	1.7	3.0	2.9	2.9	3.5	3.1	2.5
Nonferrous metals and their products.....	1.2	2.0	1.5	1.2	.8	1.2	1.0	1.2
Lumber and timber basic products.....	.5	.9	.5	1.1	.9	.6	.2	.3
Furniture and finished lumber products.....	.8	1.8	3.8	1.6	1.5	1.1	.9	.9
Stone, clay, and glass products.....	.5	.5	.4	.6	1.4	1.5	1.2	1.2
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	.6	.7	.4	.3	.5	.5	.3	.4
Apparel and other finished textile products.....	.3	.5	.7	.4	.7	.3	.1	.2
Leather and leather products.....	.8	.3	.2	.2	.2	.2	.1	.3
Food.....	.5	.9	2.4	5.0	3.2	2.5	4.4	1.8
Tobacco manufactures.....	.1	.2	.3	0	.1	.5	.2	1.3
Paper and allied products.....	.9	1.1	.7	.7	.5	.9	.9	.4
Chemicals and allied products.....	1.0	1.6	1.5	.9	1.1	.9	.7	.5
Products of petroleum and coal.....	.9	1.3	1.4	1.8	.5	1.2	.9	.6
Rubber products.....	.4	2.0	.6	.5	.5	.7	.5	.3
Miscellaneous industries.....	.6	1.5	.9	1.1	2.2	.9	.9	1.0
Nonveterans—All manufacturing.....	2.0	2.5	2.4	2.4	2.1	2.0	1.7	1.2

<sup>1</sup> Based on data collected from some 6,500 reporters employing approximately 3.5 million workers.

<sup>2</sup> Veteran involuntary separation in ordnance included in December only.

A tabulation was made of the involuntary separation rates of nonveterans in July in 10 major industrial groups employing two-thirds of all veterans in manufacturing, and accounting for more than 60 percent of the lay-offs and discharges. Except in the automobile industry (see footnote 5) for which the rate for veterans was considerably higher than for nonveterans (25 per 1,000 veterans and 3 per 1,000 nonveterans), the involuntary separation rates in the remaining nine groups were lower for veterans than for nonveterans. The range of the veteran rates was from 3 per 1,000 (lumber and rubber) to 18

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per 1,000 (food); the corresponding rates for nonveterans varied from 6 per 1,000 nonveterans (rubber) to 27 per 1,000 (food). The rates for the respective industrial groups were lower for veterans than for nonveterans by two-thirds or more in lumber, and paper products; by one-half in chemicals, rubber, and textiles; and by one-third in iron and steel, machinery except electrical, and food. The difference between the veteran and nonveteran rates in the petroleum product group was relatively small.

A special tabulation was also made of the involuntary separation rates of veterans in July 1946 in the 64 industries in the sample. In the durable-goods industries, in which veterans were discharged and laid off at a higher rate than in the nondurable-goods industries, their rates ranged from less than 1 (pottery) to 69 (shipbuilding and repairs). Of the 22 nondurable-goods industries—having involuntary separation rates for veterans of from less than 1 (seamless hosiery) to 27 (grain-mill products)—only 3 industries had rates of 10 or more: leather (10), meat products (25), and grain-mill products (27). (See table 6.)

TABLE 6.—*Labor Turn-Over Among Veterans in 64 Manufacturing Industries, July 1946*

Industry group and industry	Percent veterans of all employees	Veteran separation rates (per 100 veteran employees)		
		Total	Quit	Involuntary
<i>Durable goods</i>				
Iron and steel and their products:				
Blast furnaces, steel works, and rolling mills	25.9	6.0	5.5	0.5
Gray-iron castings	18.4	9.6	8.6	1.0
Malleable-iron castings	17.8	9.5	9.2	.3
Steel castings	18.8	7.7	5.6	2.1
Cast-iron pipe and fittings	26.7	10.5	9.9	.6
Tin cans and other tinware	15.2	13.6	11.6	2.0
Wire products	23.4	3.4	2.9	.5
Cutlery and edge tools	17.0	5.9	4.9	1.0
Tools (except edge tools, machine tools, files, and saws)	20.4	8.6	7.8	.8
Hardware	15.2	7.5	7.3	.2
Stoves, oil burners, and heating equipment	22.4	9.9	7.9	2.0
Steam and hot-water heating apparatus and steam fittings	20.4	7.7	7.0	.7
Stamped and enameled ware and galvanizing	19.7	10.1	9.2	.9
Fabricated structural-metal products	20.6	8.1	6.4	1.7
Bolts, nuts, washers, and rivets	19.9	5.3	4.9	.4
Forgings, iron and steel	21.2	7.8	5.9	1.9
Electrical machinery:				
Electrical equipment for industrial use	18.4	3.4	2.9	.5
Radios, radio equipment, and phonographs	15.0	5.6	4.5	1.1
Communication equipment, except radios	25.7	2.5	1.6	.9
Machinery, except electrical:				
Engines and turbines	21.4	6.3	5.3	1.0
Agricultural machinery and tractors	24.8	8.3	7.9	.4
Machine tools	20.6	3.7	3.2	.5
Machine-tool accessories	19.8	5.1	4.6	.5
Metalworking machinery and equipment, not elsewhere classified	18.1	4.6	4.0	.6
General industrial machinery, except pumps	21.1	5.8	5.3	.5
Pumps and pumping equipment	22.7	5.4	4.8	.6
Transportation equipment, except automobiles:				
Aircraft	25.3	8.3	6.8	1.5
Aircraft parts, including engines	23.5	4.9	3.4	1.5
Shipbuilding and repairs	19.9	12.6	5.7	6.9



TABLE 6.—*Labor Turn-Over Among Veterans in 64 Manufacturing Industries, July 1946—Continued*

Industry group and industry	Percent veterans of all employees	Veteran separation rates (per 100 veteran employees)		
		Total	Quit	Involuntary
<i>Durable goods—Continued</i>				
Automobiles:				
Motor vehicles, bodies, and trailers.....	27.3	12.0	9.2	2.8
Motor-vehicle parts and accessories.....	26.2	7.5	6.0	1.5
Nonferrous metals and their products:				
Primary smelting and refining, except aluminum and magnesium.....	22.4	9.2	8.7	.5
Rolling and drawing of copper and copper alloys.....	20.5	6.9	6.2	.7
Lighting equipment.....	18.4	12.5	7.6	4.9
Nonferrous-metal foundries, except aluminum and magnesium.....	19.9	7.9	6.1	1.8
Lumber and timber basic products:				
Sawmills.....	15.4	14.6	14.4	.2
Planing and plywood mills.....	17.8	8.5	8.0	.5
Furniture and finished lumber products:				
Furniture, including mattresses and bedsprings.....	20.2	12.2	11.2	1.0
Stone, clay, and glass products:				
Glass and glass products.....	22.9	6.3	4.4	1.9
Cement.....	25.1	11.4	10.1	1.3
Brick, tile, and terra cotta.....	18.8	15.2	14.1	1.1
Pottery and related products.....	16.8	6.7	6.7	0
<i>Nondurable goods</i>				
Textile-mill products:				
Cotton.....	10.6	8.2	8.1	.1
Silk and rayon goods.....	11.0	5.5	5.0	.5
Woolen and worsted, except dyeing and finishing.....	13.4	6.4	5.7	.7
Hosiery, full-fashioned.....	12.7	1.3	1.1	.2
Hosiery, seamless.....	5.8	4.7	4.7	0
Knitted underwear.....	6.4	5.7	5.6	.1
Dyeing and finishing textiles, including woolen and worsted.....	16.5	6.3	5.5	.8
Apparel and other finished textile products:				
Men's and boys' suits, coats, and overcoats.....	4.6	6.2	6.1	.1
Men's and boys' furnishings, work clothing, and allied garments.....	3.1	2.1	2.0	.1
Leather and leather products:				
Leather.....	17.8	5.9	4.9	1.0
Boots and shoes.....	9.7	3.2	3.1	.1
Food and kindred products:				
Meat products.....	19.0	7.7	5.2	2.5
Grain-mill products.....	18.7	8.5	5.8	2.7
Paper and allied products:				
Paper and pulp.....	23.5	7.4	7.0	.4
Paper boxes.....	17.8	7.5	7.2	.3
Chemicals and allied products:				
Paints, varnishes, and colors.....	22.3	4.6	4.2	.4
Rayon and allied products.....	24.6	3.1	2.7	.4
Industrial chemicals, except explosives.....	25.2	5.2	4.6	.6
Products of petroleum and coal:				
Petroleum refining.....	24.2	2.8	2.3	.5
Rubber products:				
Rubber tires and inner tubes.....	23.3	6.4	6.0	.4
Rubber footwear and related products.....	13.7	4.9	4.6	.3
Miscellaneous rubber industries.....	20.3	6.8	6.5	.3

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## *International Labor Relations*

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### **The Twenty-ninth Session of the International Labor Organization**

THE Conference of the International Labor Organization at Montreal, September 19 to October 9, 1946, is significant for the ratification of the agreement defining its relationship to the United Nations as a specialized international agency and establishing its affiliation with the Social and Economic Council. The ILO was organized in 1919 as a tripartite organization representing governments, labor, and management, and it has functioned effectively since that time in improving labor standards and standards of living throughout the world. It was consequently of great importance that the place of the ILO should be defined in the scheme of new international organizations and institutions.

During the intergovernmental discussions preceding the San Francisco Conference in the spring of 1945, ILO representatives contributed substantially to a clarification of the objectives of the proposed United Nations Organization and of the role of the ILO in any postwar international framework. Early in 1946, the ILO and the United Nations both appointed committees to negotiate a draft agreement providing for practical and efficient mutual collaboration. The draft agreement was approved by the Economic and Social Council in June 1946. It will become effective when it has been approved by the Assembly of the United Nations and will permit co-operation between the ILO and the United Nations Economic and Social Council in promoting economic and social development, full employment, and higher levels of living. If improvement of economic conditions is one of the methods of achieving world peace, the Montreal Conference marks an important step toward meeting that objective.

In speaking to the Conference about the ratification of the agreement between the ILO and the United Nations Organization, Senator Elbert D. Thomas, of Utah, one of the United States Government delegates to the Conference said:

This great Organization, in collaboration with the Economic and Social Council of the United Nations and other appropriate international agencies, has a stake in the planning of full production and employment as well as in the expert work of employment organization. With the Director (of the ILO), the United States

realizes that close cooperation between the ILO and other international agencies is necessary for the maximum effectiveness of all such bodies. It commends the wise arrangements for that collaboration proposed in the Director's report. In no field will teamwork and cooperation be more necessary than in striving towards our goal. The winning of full production and employment cannot be attained by running our horses—Broad Plan and Expert Organization—against each other around the global track. This run calls for double harness. Much of what it takes to organize full employment in expert detail is also needed to plan for it in the broadest terms. The excellent fact-finding facilities of the ILO provide basic data that are as essential to broad planning as they are to expert organizing for high living levels. The years of experience which the ILO has had and the wisdom of its tripartite membership should also contribute to this goal.

### *Amendment of the ILO Constitution*

The 1946 Conference carried forward the work initiated at Philadelphia in the fall of 1944, continued by the Conference in Paris in 1945 and by a Working Party in London in January and February of this year, of amending the ILO Constitution.

As a result, the Conference had before it for adoption a substantial number of significant amendments. They must now be ratified by member States. Since the United States is one of the eight countries of chief industrial importance, five of which must ratify amendments before they can take effect, ratification by this Government is of considerable importance. Moreover, the proposed revisions are in close conformity with proposals and positions already taken by the United States, whose entire delegation supported the amendments.

Some of the proposed constitutional changes merit brief discussion.

(a) *Provisions for Application of Conventions and Recommendations.*—The present Constitution provides that Conventions or Recommendations adopted by the Conference are to be submitted by member Governments to the appropriate national authorities for the enactment of legislation or other action. In the case of a Convention, if the member obtains the consent of the competent authorities it communicates a formal ratification to the ILO and reports annually to the ILO on the measures it has taken to give effect to the Convention. If a Convention is not ratified, or no action is taken on a Recommendation, no further obligation rests upon the member.

Under proposed amendments, member States would have responsibilities not solely for ratified Conventions but also for those which they do not ratify. In case of nonratification, however, the responsibilities would necessarily differ from those described above, in which the member has agreed to accept the obligations which a Convention lays down. The new obligations (which would apply to Recommendations as well as to Conventions) will require each member to report to the ILO the position of its law and practice in regard to matters dealt with and showing the extent to which effect has been given to the provisions of the Convention or Recommendation and, in the case



of a Convention, stating the difficulties which prevent or delay ratification.

As a result of this extended responsibility, the ILO and all member Governments may expect to have a much clearer and truer picture of the actual standards in effect in each country—whether they be above or below the international levels adopted by ILO. It is felt that such extended reporting will put the United States, for example, in a much more favorable light than does a mere record of the Conventions ratified by this country, since their number is not great.

A second important amendment deals with the special situation of Federal Governments in regard to their responsibilities for dealing with Conventions. The present Constitution permits a Federal Government, in which power to enter into Conventions on labor matters is subject to limitations, to treat Conventions as Recommendations. This limits obligations in such cases merely to bringing the Recommendation before whatever agency of that government would have power to act on it.

The new Constitution will require a Federal Government to assume the same responsibilities as a Unitary Government in regard to Conventions which it considers appropriate for Federal action. It will be obligated to refer to its constituent States or Provinces for appropriate action Conventions which it does not deem as appropriate for Federal action. It is apparent that the contemplated reporting process will apply equally to Federal States and will result in reports on the entire body of State and Federal labor legislation coming within the scope of ILO Conventions and Recommendations.

As adopted, the Federal States' provisions for the new Constitution took the form of a clarifying amendment which was sponsored jointly by Australia, Canada, and the United States. Speaking to that proposal a United States delegate, David A. Morse, Assistant Secretary of Labor said:

In undertaking this obligation, my Government is fully aware of and willing to assume the enormous administrative burden entailed in dealing with 48 State jurisdictions and reporting on their actions. In this connection it is worthy of note that in many instances our States have already surpassed the standards set by ILO Recommendations and Conventions. Never before, however, were we in a position to obtain formal reports on these matters. Consequently, the proposed amendment will make possible more accurate reflection of the United States' real position with respect to the application of Conventions.

The United States Government representative cooperated with representatives of the United Kingdom and the Netherlands in the adoption of a joint amendment to Article 35 clarifying the proposals regarding the application of Conventions in nonmetropolitan territories, particularly those with elected assemblies responsible for their own labor legislation.

(b) *Amendment concerning nonmetropolitan territories.*—The Conference also adopted an amendment authorizing each member responsible for the international relations of nonmetropolitan territories to appoint, as additional advisers to each of its delegates, representatives of any such territory to advise in regard to matters concerning nonmetropolitan territories.

### *Admission of New Members*

The Conference received requests to admit one new member (Lebanon) and to readmit two former members (El Salvador and Nicaragua). When they communicate to the Director of the ILO their formal acceptance of the obligations of the Constitution of the Organization, this action will bring the membership of the ILO to 55 nations.

### *Conventions and Recommendations Concerning Protection of Children and Young Workers*

The Conference adopted three Conventions and two Recommendations for the protection of children and young workers. In the first ILO Conference held in 1919, two Conventions dealing with minimum age and regulation of night work for children in industry were adopted. No further action was taken with respect to standards for children in nonindustrial occupations until 1932, when a minimum-age Convention was adopted. In the Conferences held during the war years in New York and Philadelphia, emphasis was placed on the importance of extending protection through international regulation for all children. In the spring of 1945, the Office brought together a small group of government experts from 16 countries to advise on the next steps to be taken in this program. This group strongly urged that action be taken speedily, and in particular stressed the importance of moving forward in the field of medical examination for fitness for employment and the restriction of night work for nonindustrial workers. The Paris Conference in 1945 discussed Draft Conventions on these subjects and recommended that they be placed on the 1946 agenda.

The Montreal Conference gave full consideration to these questions and adopted Conventions concerning medical examination for fitness for employment of children and young persons in industrial and nonindustrial occupations, and restriction of night work of children and young persons in nonindustrial occupations, as well as Recommendations on these subjects. The Recommendations include definitions and administrative principles and procedures which seemed too detailed for inclusion in a Convention.

### *Labor Standards in Nonmetropolitan Territories*

Plans for establishing international agreement on labor standards in nonmetropolitan territories were initiated by the Governing Body of the ILO in 1943 and Recommendations as to such standards were adopted by the Philadelphia and Paris Conferences in 1944 and 1945. At the Paris Conference it was decided that the time might be ripe for the adoption of the standards in a more binding form. The Conference, therefore, requested the Governing Body to instruct the International Labor Office to examine the provisions of the Recommendations and to select those which seemed most suitable for inclusion in Conventions and to place the question on the agenda of the 1946 Conference. Using the replies by Governments to a questionnaire, the Office prepared a draft statement of the basis for Conventions on labor standards in nonmetropolitan territories. The Office draft included the substance of the principal provisions contained in the Philadelphia and Paris Recommendations and, in addition, draft statements on minimum-wage fixing machinery, the protection of wages, and hours of work and annual holidays.

A Committee, headed by Senator Thomas, reported on this subject. In approving this report, the Conference accepted the basis for drafting Conventions concerning (1) social policy in nonmetropolitan territories, (2) the application to such territories of international labor standards contained in 12 existing conventions, and (3) maximum length of contracts. The Conference also adopted five resolutions proposed by the Committee: (1) Drawing attention of member States to the urgent need of ratification and application of previously adopted Conventions on forced labor and on recruitment, contracts, and penal sanctions in the employment of indigenous workers; (2) placing on the agenda of the next general session of the ILO the consideration of Conventions based on the conclusions of the Montreal Conference; (3) inviting the Governing Body to take certain action regarding technical aid from the Office to Governments requesting assistance in studies of living conditions in the territories; (4) regular meetings to implement the proposed Convention on social policy, and (5) the establishment of an ILO Branch Office in Africa.

### *Financial and Budgetary Matters*

Regulations providing for a finance committee consisting of one representative from each of the member Governments were approved by the Conference. This Committee will have responsibility not only for matters relating to the budget and for fiscal controls but also for decisions on certain administrative questions. The Conference decided to continue the present scale of contributions by Governments



to the ILO, pending the establishment of the United Nations contribution scale. The scale adopted by the United Nations will not be binding on the ILO, but it will have great weight because the United Nations is giving thorough and expert consideration to the problem. It was indicated that the ILO scale should be reconsidered in time to apply to the 1948 budget.

Forty-six member nations sent representatives, and two nonmember nations, the Philippine Republic and El Salvador, sent observers.<sup>1</sup> There were 8 representatives of the United Nations, 5 representatives of other official specialized agencies, and 14 representatives of Provincial Governments among the 429 persons participating in the Conference. The only major nation not represented was the Soviet Union.

### *The Future of the ILO*

Developments in the world labor situation during and since the war have emphasized the importance of the work the ILO has to do. Its place in the framework of the United Nations organizations is now generally recognized. Next spring, for the first time since the beginning of the war, the Conference will be held in Geneva. The Honorable Trygve Lie, the Secretary-General of the United Nations, in addressing one of the plenary sessions said that the United Nations welcomes association with the ILO and looks to it as "an Organization of proved efficiency to carry out one of the most important branches" of the work of the United Nations.

<sup>1</sup> The United States Delegation to the Conference was composed as follows:

*Government delegates.*—Hon. David A. Morse, Assistant Secretary of Labor, (Head of the Delegation), Hon. Elbert D. Thomas, Senator from Utah;

*Advisers and substitute delegates.*—Hon. Augustine B. Kelley, Congressman from Pennsylvania; Frieda S. Miller, Director, Women's Bureau, U. S. Department of Labor; Advisers from the U. S. Department of Labor were Clara M. Beyer, John S. Gambs, Beatrice McConnell, Louis Sherman, Faith M. Williams, and Thacher Winslow; from the U. S. Department of State, Frederic P. Bartlett, Alice M. McDiarmid, Murray Ross, and Bernard Wiesman; from the Bureau of the Budget, Walter Laves; from Ohio State Department of Industrial Relations, Richard Tobin; from the Puerto Rican Insurance Fund, Guillermo Atilas Moreu; In charge of Senate Education and Labor Committee matters, Ethel Evans; Substitute Adviser, Millard Cass of the Department of Labor.

*Employers' delegate.*—James D. Zellerbach, Vice Chairman of the Governing Body of the ILO. Advisers: John Meade, M. M. Olander, Thomas R. Reid, Charles E. Shaw, and James Tanham.

*Workers' delegate.*—Robert J. Watt, member of the Governing Body of the ILO. Advisers: C. L. Darling, F. H. Fljoldal, V. S. Gautier, J. C. Lewis, Jennie Matyas, Joseph P. McCurdy, and John L. Spalding.

Mary M. Cannon of the Department of Labor and Millard Kenestrick of the Department of State served as secretaries to the Delegation.

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# Labor Requirements

## Labor Requirements in Southern Pine Lumber Production<sup>1</sup>

IN ORDER to determine the volume of employment required to produce the necessary materials for the present housing program, or for any other major construction activity, the Bureau of Labor Statistics is conducting a series of man-hour surveys in the basic building materials industries. The present study<sup>2</sup> analyzes the man-hours required to produce lumber in 1945-46 and discusses some of the factors affecting labor requirements in the southern pine region. This forest area embraces most of the lower South and derives its name from the species of trees predominant in the area. The lumber production of this vast area constitutes about a third of the total production of the country, which is expected to reach about 30 billion board feet in 1946.

It was found that a total of 41.2 man-hours of labor were required to produce 1,000 board feet of finished construction lumber in the southern pine region in 1945-46. This is a substantial increase from the 30.7 man-hours which, according to a previous Bureau study,<sup>3</sup> were required in 1935, and lends some support to the statement frequently made that the task of meeting the huge current demand for lumber is complicated by a relatively low level of productivity.

### *Processes and Characteristics of Industry*

Lumber is defined<sup>4</sup> as the product of the saw and planing mill not further manufactured than by sawing, resawing, crosscutting, passing lengthwise through a standard planing machine, and, for some purposes, through a matching machine or molder.

The basic processes of lumber production are similar in all the forest regions of the country. The trees are felled, limbed, and

<sup>1</sup> Prepared by Eugene J. Lowther and Roland V. Murray, under the direction of Brunswick A. Bagdon, in the Bureau's Division of Construction and Public Employment. This study was made in cooperation with the National Lumber Manufacturers Association, the U. S. Southern Forest Experiment Station, and the Southern Pine Association.

<sup>2</sup> This is the third study in the series and covers the first section of an industry-wide study of the lumber and allied building materials industries. The first study covered labor requirements in cement production and was summarized in the September 1946 Monthly Labor Review (p. 355); the second study covered labor requirements in the production and distribution of concrete masonry units and concrete pipe and was summarized in the November 1946 Monthly Labor Review (p. 681).

<sup>3</sup> Labor Requirements in Lumber Production, 1937, in Monthly Labor Review, May 1937 (p. 1136). Reprinted as Serial No. R. 529.

<sup>4</sup> Lumber: Simplified Practice Recommendation R16-39 (U. S. Department of Commerce, 1940).

bucked (cut into suitable lengths), and the resulting logs are skidded to a bunching site. The latter is equipped with a portable facility for loading the logs on some type of vehicle which transports them to the sawmill. Here they are dumped into a log pond or yard from which they are carried as needed to the head saw, where they are reduced to boards, planks, or timbers of the desired thicknesses. This lumber is conveyed to the edgers and trimmers (special saws for squaring edges and ends to the desired dimensions), and out to the "green chain" (conveyor leading from the last saw), where it is graded and sorted. It is then ready for seasoning (the reduction of the moisture content to increase strength and dimensional stability) in the dry kiln or seasoning yard. Finally, in the planing mill, the rough dry lumber is generally dressed smooth on two or more surfaces, and, frequently, is further processed to produce tongue-and-groove or shiplap edges, or certain other standard workings.

The nature of the southern pine timber stand has, however, imposed certain very marked characteristics on lumbering in the region. Timber in this area is generally second- or third-growth, and occurs principally in small, scattered tracts. These two facts account for the great numbers of small producers in the region, and the limited use of the heavy, highly mechanized equipment found in those sections of the country, particularly in the Pacific Northwest, where sawlog diameters are very large and timber growths are dense. The importance of the small mill in the South is strikingly evident from figures presented in the most recent Census of Forest Products, which show that in 1944, mills sawing less than 1 million board feet a year accounted for 33 percent of all lumber produced in the South. In contrast, mills of this size accounted for only 3 percent of the total cut in the West, the other major producing area. Moreover, there is evidence that the importance of the small mill is increasing rather than declining, and that an abnormal increase took place during the war when the demand for lumber brought many individuals into the field. Thus, only 27 percent of the total production of the South in 1942 was cut by those mills sawing fewer than 1 million board feet, as compared with 33 percent in 1944.

These small mills differ not only in size, but in basic type, from the larger mills. Generally speaking, a mill cutting fewer than a million board feet a year is of a portable type, operating in the midst of a small timber stand, and is readily movable to another stand when the supply of sawlogs has been exhausted. Such mills have no seasoning or planing facilities and produce solely rough green lumber. This has given rise to an important type of processing and marketing operation in the South—the concentration yard. Typically, these yards do no logging or primary sawing. Their entire production is developed from rough green lumber, purchased from "peckerwood"

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mills<sup>5</sup> in the surrounding countryside, which they season, dress, and market. In 1940 it was estimated by the U. S. Forest Service that there were in the lower South about 500 of these concentration yards, and in addition more than 500 stationary sawmills which operated as concentration yards; the number of both types of operations has almost certainly grown since then.

Thus, it is evident that southern lumbering falls into two distinct groups—the peckerwood-concentration yard combinations; and the stationary mills, which generally have their own seasoning and planing facilities. The latter frequently own or control their own timber tracts, which are normally managed on a sustained-yield basis, the amount of lumber cut each year being held in balance with the amount of growth.

### *Scope and Method of Survey*

To obtain the data on which the current study is based, a Bureau representative visited 47 medium and large southern pine mills selected for survey through consultation with the Southern Forest Experiment Station and the Southern Pine Association. However, 11 of these plants did not maintain suitable records for the purpose of this study, and 8 more were found unsuitable for inclusion for reasons such as specialization in other than lumber production and extreme irregularity of operation. The study is therefore based on data from 28 medium and large southern pine mills, a sample which leaves something to be desired particularly with respect to coverage among the small mills. The sample is, however, believed to be well-balanced with respect to geographic dispersal, types of operation and equipment, and variety of product.

Man-hour information—from estimated rather than recorded figures—for some of the items needed was, in fact, obtained for about a dozen of the portable mills. This material is presented separately and is not included in the general averages. It is doubtful that data could be obtained for a representative sample of small mills, because the great number of these plants, the remote locations of many of them, and their frequent shifts of location make the problems of field coverage exceedingly difficult. More serious is the fact that only exceptional mills of this category maintain records of the type needed, and in these cases both management ability and equipment are likely to be well above the average for all small mills.

The 28 plants surveyed were located in Alabama (3), Arkansas (5), Georgia (3), Louisiana (3), Mississippi (7), and Texas (7). The sample included 1 plant which, although it had a stationary sawmill in its yard, was at the time of the survey operating solely as a concentration yard, and 1 concentration yard which had facilities for this type of operation only. The total production in these 28 mills was

<sup>5</sup> A term commonly used for the type of small portable mill described.

at the rate of about 33 million board feet per month, and was distributed by type of product approximately as follows:

	Percent of production
All types of products <sup>1</sup> .....	100.0
Rough green lumber.....	9.2
Rough dry lumber.....	11.4
Dressed lumber.....	50.0
Center-matched and shiplapped lumber.....	16.2
Flooring.....	2.6
Miscellaneous (including molding) and unspecified.....	10.6

<sup>1</sup> Arranged approximately by degree of finish.

At each plant, the field representative transcribed from operating statements and pay-roll records data relating the number of board feet processed to the number of man-hours worked, in each major department, in a period of normal operation during the latter part of 1945 or early in 1946. Obtaining separate production figures for each department was particularly necessary in this industry because of the frequent wide variation in quantities processed through the various operations of a mill within the same period. This was partly because of the introduction into the manufacturing process of material initially processed elsewhere (e. g., use of purchased logs or rough green lumber), and partly because of conditions which make it expedient to process more material in one department than in another (e. g., during unfavorable weather, logging production may be at a low level, while the sawmill is working out of a large supply of logs in the pond).

Man-hour requirements per 1,000 board feet of production for each department were established by dividing the number of man-hours worked by the number of thousands of board feet processed. The sum of these average departmental requirements is the total processing requirement.

### *Man-Hour Requirements, 1946*

The average man-hour requirements in 1946, by major process, in the production of lumber in the southern pine region, and the ranges in the sample plants surveyed, are presented below:

	Man-hour requirements per 1,000 board feet of lumber processed	
	Average	Range in sample plants
All operations.....	41.2	( <sup>1</sup> )
Logging.....	14.6	9.5-19.9
Sawmill.....	9.5	6.6-14.2
Seasoning.....	6.7	2.5-10.6
Planing mill.....	6.4	1.3-15.0
Shipping.....	2.3	0.5-6.2
Administration and sales.....	1.7	0.4-4.4

<sup>1</sup> It is not feasible to show ranges of total requirements because of the number of plants which do not perform all operations.

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The total requirements figure of 41.2 man-hours represents the average number of man-hours required to produce 1,000 board feet of the planed-lumber items constituting the output of the sample mills in 1945-46.

A quite different result is obtained, however, by the simpler method of relating total man-hours worked to total board feet of finished lumber produced, during a specified period. This method was used in a survey conducted by the Southern Pine Association, which obtained from a sample of 59 mills the total number of man-hours, excluding administrative, worked during the year 1945 and the first 6 months of 1946, and the total number of board feet of production during the two periods, including that developed from purchased logs and rough green lumber. The total man-hour requirements per 1,000 board feet, obtained from these data by dividing the aggregate man-hours by the aggregate production, were 33.0 in 1945 and 34.8 in 1946. Tabulating the 1945-46 material collected by the Bureau in a similar manner gave an average of 33.7 man-hours, which is in reasonably good relation to the trade association's figures, considering the differences between the two samples. These averages, which are substantially lower than the 39.5 man-hours (excluding administration) indicated in the above tabulation, represent the man-hour requirements for those operations, or parts of operations, performed by the sample mills.<sup>6</sup> They do not represent over-all requirements for lumber production, since they do not include the hours of labor applied to purchased logs and purchased rough lumber before they reach those mills.

As has been pointed out previously, it was not possible to obtain a sufficient amount of reliable data concerning requirements in the "peckerwood" operations. Some partially estimated figures were obtained, however, from several of these mills, all of which were subsidized by large-scale concentration plants. These figures indicated that the man-hours required for logging and sawing in these portable operations were 17.5 per 1,000 board feet, and that an additional 4.2 man-hours were needed to haul that quantity of the rough green lumber to the concentration yard. These requirements, totaling 21.7 man-hours, are roughly comparable to the 24.1 man-hours for logging and sawing shown above and emphasize the well-known fact that the efficiently operated portable mill offers certain advantages in operations in the small, scattered tracts of timber characteristic of much of the South. Some of these are economies in transportation (it is cheaper to haul rough green lumber than logs), reductions in overhead, and an increase in general flexibility.

However, it should be emphasized that these small-mill requirements are based on data from a particularly efficient group of opera-

<sup>6</sup> Concentration yards were omitted from both samples in arriving at the unit labor requirements by the method described in this paragraph. Inclusion of such plants would, of course, lower the averages still more, since all of the production of these mills is developed from the rough green stage.



tions. Most of them were equipped with electrically operated carriages and were powered by Diesel engines. All were under the close supervision of parent companies which applied modern business methods to the integrated activity. It is therefore likely that requirements in the more typical "peckerwood" mill average considerably higher than those shown above.

#### VARIATIONS BY PROCESS

It will be noted that the foregoing tabulation shows a fairly wide range of requirements in each of the operations. Specific reasons for these plant-to-plant variations are discussed below, but a general observation to be borne in mind is that few other industries embrace as many variables affecting labor requirements as does the southern pine industry. These include not only the wide variety of products of these mills—from rough green lumber to such relatively highly processed planing-mill products as molding and flooring—but also extremes in production methods, from a rather primitive use of human and animal power in transportation to the use of the most modern types of straddle- and lift-trucks, automatic sorters, mechanical unloaders, and other labor-saving machines.

*Logging.*—Labor requirements in logging are primarily affected by natural factors; i. e., by the terrain of the area being cut over, by the character of the timber stand, and by weather conditions. (The undue effect of the latter factor was minimized by the selection of a period of normal operating conditions, but abnormally wet weather during the first half of 1946 in some southern areas had kept labor requirements for logging high during several months.) Thus, the felling and bucking of small scattered trees, the skidding of the logs over hilly ground or through thick underbrush, and the difficulty of getting a heavy logging truck from a marshy bunching-site to a hard-surfaced road, all tend to increase logging requirements in certain of the operations surveyed.

Moreover, these adverse natural conditions in some cases make it impractical for southern loggers to use certain improved methods employed elsewhere. For example, only one of the plants surveyed used portable power saws exclusively in the woods—handsaws and axes being almost universally used in felling, bucking, and limbing. About a third of the sample plants had experimented with power saws, but reportedly had found them too heavy for efficient use on the small, scattered trees and in the dense underbrush typical of most of the areas. It may be, however, as some lumbermen believe, that failures with the power saws in these cases were caused primarily by the improper training of the woods crews in their use and maintenance. In this connection, it may be noteworthy that the logging operation

which showed the second lowest man-hour requirement (11.7) was the one that used power saws exclusively.

The method of skidding the log from the stump to the loading area is also frequently determined by local conditions. Thus, although tractor skidding is generally most efficient, operators in hilly areas, as in Arkansas, have found mule and horse teams better adapted to the terrain, and in the bayou region of Mississippi and Louisiana, there is still some use of oxen.

The logging railroad has largely passed from the picture in the South; the Southern Pine Association reports that 98 percent of its members' logs are hauled to the mill by truck. Once a truckload of logs reaches the highway, there is little variation in requirements for the haul to the sawmill, except insofar as distance is concerned.

*Sawing.*—The chief factors affecting man-hour requirements in the sawmill are the quality of the sawlog (the degrees of rot, crook, and taper existing), and its average diameter, the type of head-saw rig and other equipment, and the kind of lumber being sawed. The influence of the first item is discussed on page 950; at this point it need only be noted that as the size of the log decreases, the man-hour requirements increase markedly. Types of head-saw equipment which reduce labor requirements significantly are the "steam nigger" (a mechanical arm which eliminates the work of 2 or more men in moving the log on and off the carriage and turning it during sawing), and the electric set works (by means of which 1 man is able to replace 2 or 3 in controlling the dogs and blocks which hold the log in proper position on the carriage during sawing). The gang saw, which reduces a large cant or slabbed log to boards in a single operation, and which is an important factor in reducing man-hour requirements in some sections of the country (at some sacrifice of lumber quality) is not often seen in the South. On the other hand, the resaw, which reduces relatively heavy boards produced by the head saw to desired thicknesses, is frequently encountered. The saving of labor in this resawing operation is not apparent to the layman who has not observed the actual operation of the primary sawing of the log. However, the United States Forest Service has established that in the sawing of southern hardwood the addition of a resaw reduces total sawing time as much as 40 percent.<sup>7</sup>

The variation of sawing requirements with the type of lumber produced is readily apparent with respect to size, 1,000 board feet of 2-inch boards requiring obviously about half the sawmill labor needed for the same quantity of 1-inch boards. What is not so apparent is the effect on labor requirements of "sawing for grade." The increased work involved in the repeated movement of the log so as to secure the maximum amount of high-grade lumber is well illustrated, however,

<sup>7</sup>Effect of Resaw on Output of Single Band Mills in Southern Hardwoods (U. S. Forest Service, 1933).

by one of the mills included in the survey. The sawing requirements in this mill were the second highest of the entire sample (13.3 hours per 1,000 board feet), despite its use of the most modern equipment, including electric set works and band resaw. The explanation lies in the emphasis which this firm, manufacturing a widely known "big mill" product, places on quality.

*Seasoning.*—Contrary to popular opinion, the reputable southern mills are not merchandising large quantities of green lumber in order to meet the current unprecedented demand, and the labor requirements for seasoning are substantial (see page 949). Typically, all pine is kiln-dried for from 48 to 72 hours, and hardwood is air-dried for from 2 to 4 months (in some cases, particularly with the hardwoods, a combination of the two methods is used). With either method, however, the actual process of reducing the moisture content of the green lumber accounts for few man-hours, the greatest labor requirements arising from the handling of the lumber in the yard. It is also, presumably, in this handling that the greatest variations in seasoning requirements occur. One phase of the handling problem is the movement of lumber about the yard, for which the equipment in the plants visited ranged from hand-pushed 2-wheel dollies to the most modern types of straddle- and lift-trucks. The use of the latter vehicles represents perhaps the greatest stride in the reduction of labor requirements that the industry has made in recent years. The straddle-truck is the more widely used. It is a high-bodied truck designed to straddle a uniform "package" of lumber, lift it off the ground, and carry it beneath the chassis rather than on it. At present, this equipment is found only in relatively few of the larger mills, but a number of the operators surveyed reported that it had been ordered.

Another aspect of the handling operation is the stacking of lumber (for either kiln- or air-drying), which appears to be almost exclusively a hand process in the South. The sample mill with the highest seasoning requirements (10.6 man-hours per 1,000 board feet) air-dried its lumber by end-stacking for a month, followed by flat-stacking for a month, thus more than doubling its stacking requirements.

*Planing.*—It will be noted that the range of man-hour requirements for planing is wider than that for any other operation. Over three-quarters of the plants surveyed, however, fell within a range of 2 man-hours above or below the average requirement of 6.4 man-hours. The extreme cases represent actual but unusual planing-mill operations. Lowest requirements (1.3) were found in a "mill" which consisted of a single planer located in a shed adjacent to a railroad siding. Boards of a standardized size were fed from the surrounding drying yard into this planer and pushed by the following boards along a trough leading out of the shed and into a boxcar. This operation represents the minimum of planing-mill processing—the mere dressing

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of the board to the smooth surfaces required for most lumber uses. On the other hand, the planing mill requiring the maximum number of man-hours (15.0) was also the plant producing the widest variety of highly refined products, including packaged trim and hardwood flooring. This planing mill was composed of a battery of machines, including resaws and ripaws, center- and end-matchers (for cutting tongue-and-groove joints in the edges and ends of the boards), molders, and sanders.

*Shipping.*—With the current demand for lumber greater than the supply, shipping requirements generally do not include the operation of a "slick shed" (storage shed for dressed lumber), but represent chiefly the labor needed to move the lumber out of the planing mill and directly into a boxcar or truck. (Indeed, for this reason, planing mill and shipping labor were in several cases so closely related that it was not possible to separate them for the purposes of this study). On the whole, requirements for this department grouped closely about the average of 2.3 man-hours, three-quarters of the mills surveyed falling in a range of plus or minus 1 man-hour of this figure.

*Administration.*—For the purposes of this study, administration was taken to include only the activities of the central office executive and clerical personnel. (Activities of departmental superintendents and foremen were included as indirect charges to the appropriate operation.) Except for the fact that sales-promotion activities were negligible—an expected result of today's marketing conditions—the study developed little of interest in connection with requirements in administration.

### *Comparison of Requirements, 1935 and 1946*

In 1935, the Bureau of Labor Statistics conducted a survey of labor requirements in the production of a number of building materials in the forest-products group, which included southern-pine planing-mill lumber. The figures developed in that study appear roughly comparable to those obtained in the current survey.

	Man-hour requirements per 1,000 board feet		Percent of change, 1935 to 1946
	1935 <sup>1</sup>	1946	
All operations.....	30.7	41.2	+34
Logging.....	10.9	14.6	+34
Sawmill.....	<sup>2</sup> 6.0	9.5	+58
Seasoning.....	<sup>2</sup> 4.8	6.7	+40
Planing mill.....	<sup>2</sup> 4.5	6.4	+42
Shipping.....	2.5	2.3	-8
Selling and administration.....	2.0	1.7	-15

<sup>1</sup> Labor Requirements in Lumber Production, in Monthly Labor Review, May 1937 (p. 1136).

<sup>2</sup> For comparability with the current report, a separate item of 0.4 hour of "miscellaneous manufacturing labor" was distributed among the indicated operations.

The total requirements show a sharp increase (34 percent) over the 11-year period, and all departments, except shipping and administration, required a substantially greater number of man-hours per 1,000 board feet in 1946 than in 1935. It is believed that these figures on the whole reflect with fair accuracy the direction and magnitude of changes in labor requirements during the period covered, but caution should be used in applying these percentages to specific problems. The relatively small samples on which both surveys were based, the fact that the samples were not identical, and the differences in the methods used, all impose limitations on exact comparison between the findings.

Factors entering into the increase in man-hour requirements since 1935 are of two classes, representing (1) conditions of a permanent or semipermanent nature and (2) purely temporary conditions arising from the excessive postwar demand for construction materials. Unfortunately, the nature of the data does not permit measurement of the influence of individual factors—they can only be listed and discussed.

One of the long-range factors involves variations in the average size of the sawlog. The U. S. Forest Service has established through a series of time studies that man-hours required to produce 1,000 board feet of lumber decrease sharply as the size of the log increases (until very large sizes of logs are reached), as the following table indicates:

*Labor Requirements in Logging and Milling Pine Lumber, by Tree Size, 1935<sup>1</sup>*

Tree diameter (breast high)	Man-hour requirements per 1,000 board feet			
	Logging	Sawing	Supervision	Total
Average.....	5.6	7.4	0.5	13.5
8 inches.....	9.0	10.3	.7	20.0
10 inches.....	8.3	10.0	.7	19.0
12 inches.....	7.3	8.8	.6	16.7
14 inches.....	6.1	7.7	.6	14.4
16 inches.....	5.3	7.0	.5	12.8
18 inches.....	4.7	6.6	.5	11.8
20 inches.....	4.4	6.3	.4	11.1
22 inches.....	4.2	6.0	.4	10.6
24 inches.....	4.2	6.0	.4	10.6
26 inches.....	4.4	6.1	.4	10.9
28 inches.....	4.9	6.5	.5	11.9

<sup>1</sup> Condensed from table 1, p. 3, "Operating Small Mills in Wartime", U. S. Forest Service, 1943.

<sup>2</sup> The substantially lower average logging requirements shown in this table as compared to the logging averages shown for both 1946 and 1935 (p. —) result primarily from the fact that the above data are based on small mill operations, in which log hauling requirements are at a minimum.

According to informed opinion, the average diameter of sawlogs in the south has decreased perhaps 3 inches over the period between the two surveys. This factor alone could account for an increase of 2 or 3 hours in the logging and sawing operations. (Subsequent operations would be affected by this factor only to the extent that the output from smaller logs might involve a higher percentage of smaller

boards.) Moreover, these estimates of increases in labor requirements with decreases in tree size probably understate this factor, since recent surveys by the U. S. Forest Service indicate that the average volume of trees of similar diameter is less today than 10 years ago, owing to increased taper and other growth characteristics.

A second long-term element in increased requirements involves the migration of experienced workers from the lumber industry to higher-paying war industries. It is generally believed that many of these workers have no intention of returning to their former occupations. One of the larger mills in the current survey reported that half of the Negro families of the mill village had been lost through migration to the northern war plants, and that none were expected to return. Industry opinion is that the more resourceful and more capable workers make up the greater part of those migrating to localities offering better wage opportunities. It would seem that a stable supply of workers in this part of the lumber industry is difficult to maintain in competition with industries having better working conditions and paying higher wages. The present situation with respect to wages is illustrated by the Bureau's earnings tabulations for April 1946, a month during which much of the labor requirements data were collected. These indicate that whereas the national average of hourly earnings in durable-goods manufacturing was \$1.13, the average in sawmills and logging camps was 83 cents for the entire country and 65<sup>a</sup> cents for the southern pine region.

One of the temporary conditions responsible for the increase in man-hour requirements is linked to this difficulty of obtaining skilled, reliable labor. It is the current policy in some mills not to lay off a valued worker during "down" or slack periods (caused by break-downs, shortages of logs due to adverse weather, etc.), but to maintain him on the pay roll to dissuade him from seeking another job. The effect of these "idle hours" on labor requirements may be considerable in some cases. Thus, the sample mill with the highest over-all requirements (58.4 man-hours per 1,000 board feet, as compared with an average of 41.2 for all mills surveyed) expressly gave this as the reason for its high ratio of man-hours to production.

The second factor temporarily increasing unit man-hours was the current practice in most southern pine mills of processing the hardwoods which occur intermixed with the pine stands. These hardwoods had not been previously considered merchantable, since they were of too low a grade for furniture and flooring and too hard for construction purposes. The heavy demand for lumber made it temporarily profitable to market this material. Thus, hardwood constituted about 22 percent of the total production of the mills sur-

<sup>a</sup> Since this average is based principally on data from the larger stationary mills, it is believed that it somewhat overstates average earnings for the entire industry in this area.



veyed. Not all of this was of the low-grade type, however. Two mills, in which hardwoods accounted for 29 percent of production, normally manufacture a higher grade of hardwood lumber, but could not segregate their pine from their hardwood-processing requirements.

There is little doubt in the minds of practical lumbermen that hardwood requires more man-hours of processing than pine, although the statistical data supporting this view are scanty. Surveys have been made<sup>9</sup> which tend to establish records of higher requirements for southern hardwood, but these have compared processing hours in the true Delta hardwood area with those in the pine area, which is not an entirely satisfactory comparison for the present purposes. None of the mills in the current survey maintained separate hardwood man-hour records, although 1 of the 2 mills producing a high grade of hardwood had maintained such records up to 1942. Its records for 1942 indicated that logging required 15.1 hours per 1,000 board feet for hardwood as against 11.2 for pine. These figures reflect the difficulty of skidding and hauling the heavier hardwood log over the more difficult terrain where these woods generally occur, as well as that of cutting the denser wood. The requirements for milling, which apparently includes sawing, seasoning, and planing, were 31.7 hours for hardwood and 28.6 for pine.

To offset all these factors tending to increase labor requirements over the 11-year period, there were few, if any, which tended to decrease them. Widespread use of the newer types of equipment might have had this effect, but their adoption was discouraged by the relatively low wage rates which have prevailed in the South, and by the type of timber stands. Several of the operators interviewed predicted, however, that rising minimum-wage rates would force the mills to lower their costs through use of the new mechanized devices.

In the two departments shipping and administration, unit man-hour requirements decreased slightly over the 11-year period. It is believed that both of these decreases are attributable to the fact that fewer functions are currently performed in these departments than under normal conditions. As previously pointed out, shipping today consists essentially of moving lumber out of the planing mill and into a waiting freight car or truck. As to administration requirements, while the 1935 figures were obtained from firms employing a full selling staff, none of the mills in the current survey reported any activity of this nature.

<sup>9</sup> For example, *Primary Wood Products Industry in the Lower South* (U. S. Forest Service, 1940), pp. 17-18; and the 1935 requirements study by the Bureau, previously referred to.

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### *Supplementary Requirements*

One of the purposes of this series of studies is to estimate the total number of man-hours of labor represented by a unit of the specified building material delivered and ready for use on the construction site. This estimation of over-all requirements is simplified in the case of southern pine lumber production by the nature of the industry. Since it is a basic extractive industry, there are no requirements to be added for raw-material production. (A considerable variety of such materials as lubricating oils and greases, lumber-treating chemicals, etc., are consumed in the production of lumber, but no allowance has been made for such items, nor for the depreciation of machinery, in these studies.) Again, power requirements, which represent a substantial portion of total requirements in some industries, are negligible in the pine-lumber area, because practically all the fuel used to fire the boilers in the mills studied was sawmill waste in the form of slabs, trimmings, and edgings. This, indeed, was the only use to which waste material was put in the sample plants, with the exception of a negligible local sale of waste lumber for firewood. None of these plants engaged in the manufacture of such byproducts as lath, wood flour, or briquettes, which have reputedly been found profitable by some operators.

The data necessary for estimating roughly the man-hours required to transport 1,000 board feet of lumber from the mill to the construction site are available in Bureau publications. A study of requirements in the rail transportation of construction materials<sup>10</sup> developed that the average haul of a ton of lumber required 3.8 man-hours of labor. The transportation of 1,000 board feet of southern pine lumber, which weighs about 1½ tons, therefore requires about 5.7 man-hours. An additional 1.5<sup>11</sup> man-hours are estimated to be required to haul 1,000 board feet from the terminal to the construction site. The over-all transportation requirements are thus in the neighborhood of 7.2 man-hours, without accounting for possible handling at various merchandising levels. Conservatively, then, it may be estimated that 1,000 board feet of southern pine lumber delivered on a job site represents a labor input of 48.4 man-hours.

<sup>10</sup> See Monthly Labor Review, October 1937 (p. 846), Labor Requirements in Rail Transportation of Construction Materials (also reprinted as BLS Serial No. R. 637).

<sup>11</sup> See Monthly Labor Review, May 1937 (p. 1133), Labor Requirements in Lumber Production (also reprinted as BLS Serial No. R. 529).

## Wage and Hour Statistics

### Wage Structure of the Hosiery Industry, January 1946<sup>1</sup>

IN JANUARY 1946, plant workers in full-fashioned hosiery mills averaged 97 cents an hour, exclusive of premium pay for overtime and night work; in seamless (circular knit) hosiery mills, the average was 63 cents. The wage differential between the two branches of the industry reflects dissimilarities in manufacturing processes, skill requirements of the labor force, value of product, mill location, and unionization. In both, earnings of the majority of the mill workers are based on piece-rate scales.

Women's full-fashioned hosiery, produced on costly and complicated knitting machines, was made principally from silk before the war; rayon was the wartime substitute. Since September 1945, nylon has been available in increasing quantities and three-fifths of the mills studied by the Bureau of Labor Statistics in January 1946 reported nylon hosiery as their major product.<sup>2</sup> As nylon yarn becomes more plentiful, this proportion will probably increase and affect wage levels to some extent. This study showed that nylon hosiery workers averaged about 10 percent more pay an hour than those making rayon stockings.

Seamless hosiery mills, specializing in men's and children's hosiery although some make women's hosiery, use cotton yarns predominantly. Earnings of plant workers making women's seamless hosiery were the highest in most occupations, and earnings in children's hosiery were the lowest.

<sup>1</sup> This report was prepared by Hilda W. Callaway of the Bureau's Wage Analysis Branch. Detailed information on wages may be obtained from a mimeographed report: *Wage Structure—Hosiery, 1946*. Wage statistics, by locality, are available in the Bureau's regional offices.

<sup>2</sup> Altogether 393 representative mills employing 64,250 workers were surveyed, or nearly one-half of the mills with 8 or more employees representing 58 percent of the employment in the entire industry and in each branch. The number of full-fashioned and seamless hosiery mills studied was 187 and 206, respectively. Those mills which produced both full-fashioned and seamless hosiery were tabulated according to major product. Similarly, independent dyeing and finishing hosiery mills were also included in the study.

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*Full-Fashioned Hosiery*

Straight-time average hourly earnings<sup>3</sup> of full-fashioned hosiery mill workers (97 cents) exceeded those in many other consumer goods industries in January 1946. Men, comprising over two-fifths of the mill workers, averaged \$1.24 an hour, or 59 percent more than women plant workers (78 cents). Few of the women and 1 out of every 7 men earned over \$1.70 an hour. At the lower end of the wage scale, only an eighth of the men compared to more than a third of the women averaged less than 65 cents an hour (table 1).

## REGIONAL DIFFERENCES IN WAGE LEVELS

There is a scattering of mills in other regions but the Middle Atlantic States and southeast each account for about 40 percent of all mill workers in the industry and therefore determine the national wage pattern. Average hourly earnings in the Middle Atlantic States were 11 percent above the national average of 97 cents; in the Southeast they were 9 percent below that level.

TABLE 1.—*Percentage Distribution of All Plant Workers in Full-Fashioned Hosiery Mills by Straight-Time Average Hourly Earnings,<sup>1</sup> Selected Regions, January 1946*

Average hourly earnings (cents)	United States <sup>2</sup>	Middle Atlantic	South-east	Average hourly earnings (cents)	United States <sup>2</sup>	Middle Atlantic	South-east
Under 45.0.....	2.4	0.5	4.4	135.0-139.9.....	2.4	2.9	2.2
45.0-49.9.....	2.2	1.0	3.6	140.0-144.9.....	2.0	2.4	2.0
50.0-54.9.....	4.8	1.7	6.4	145.0-149.9.....	1.9	2.3	1.6
55.0-59.9.....	8.6	7.9	9.5	150.0-159.9.....	3.0	3.8	2.0
60.0-64.9.....	6.6	4.6	9.1	160.0-169.9.....	2.7	3.4	1.9
65.0-69.9.....	6.8	5.5	8.1	170.0-179.9.....	2.1	2.7	1.3
70.0-74.9.....	5.4	4.4	6.7	180.0-189.9.....	1.6	2.2	.8
75.0-79.9.....	5.5	5.1	5.6	190.0-199.9.....	1.0	1.6	.4
80.0-84.9.....	5.4	5.9	4.7	200.0-209.9.....	.7	1.2	.2
85.0-89.9.....	4.3	4.8	3.4	210.0-219.9.....	.5	.9	.1
90.0-94.9.....	4.1	4.6	3.3	220.0-229.9.....	.3	.6	.1
95.0-99.9.....	4.0	4.8	3.2	230.0-239.9.....	.2	.3	( <sup>3</sup> )
100.0-104.9.....	4.0	4.1	3.8	240.0-249.9.....	.1	.2	( <sup>3</sup> )
105.0-109.9.....	3.3	4.0	2.7	250.0-and over.....	.3	.7	( <sup>3</sup> )
110.0-114.9.....	3.3	3.8	3.0				
115.0-119.9.....	2.6	3.1	2.3	Total.....	100.0	100.0	100.0
120.0-124.9.....	2.8	2.9	2.8				
125.0-129.9.....	2.6	3.0	2.5	Average hourly earnings <sup>1</sup>	\$0.97	\$1.08	\$0.88
130.0-134.9.....	2.5	3.1	2.3	Total number of workers.	56,450	22,425	22,725

<sup>1</sup> Excludes premium pay for overtime and night work.

<sup>2</sup> Includes data for other regions in addition to those shown separately.

<sup>3</sup> Less than .05 of 1 percent.

<sup>3</sup> The figures presented exclude premium overtime, shift differentials, and nonincentive bonuses (such as Christmas and profit-sharing) but include cost-of-living bonuses. In addition, earnings of inexperienced beginners, apprentices, and handicapped plant workers are included in the over-all averages and distributions but excluded from the occupational data; administrative, professional, and executive personnel were omitted entirely from the study. Field representatives of the Bureau obtained the data from January 1946 pay rolls and other related records of the cooperating hosiery mills. Estimated employment on all shifts in hosiery mills with 8 or more employees is shown, instead of employment in the mills actually studied.

Middle Atlantic hosiery mills are concentrated in two relatively high wage areas—Philadelphia and Reading—and a few are scattered in other localities of Pennsylvania, New York, and New Jersey. Competition for labor in this region is generally greater than in the Southeast where such comparatively low-wage industries as textiles and furniture are among the major bidders. As a result, there are marked differences in earnings between the two regions. Hourly earnings of men single-unit knitters, for example, were 27 percent higher in Middle Atlantic hosiery mills than in the Southeast; similarly, women seamers averaged 26 percent more and folders and boxers 15 percent more in the former region. The over-all averages shown below illustrate the differences between the key wage areas in January 1946, as well as the differences in earnings of men and women.

	Average hourly earnings		
	Total	Men	Women
Middle Atlantic:			
Philadelphia.....	\$1. 13	\$1. 42	\$0. 91
Reading.....	1. 13	1. 41	. 87
Southeast:			
Charlotte.....	1. 00	1. 33	. 79
Winston-Salem.....	. 97	1. 21	. 78
Chattanooga.....	. 90	1. 25	. 69
Statesville.....	. 80	1. 03	. 67

#### OCCUPATIONAL DIFFERENCES IN WAGE LEVELS

Essentially, the difference between men's and women's earnings resulted from the concentration of the former (about three-fifths) in skilled knitting occupations, such as footers, leggers, and single-unit and backrack-converted-machine knitters. In these knitting operations, men's earnings varied from \$1.17 to \$1.86, depending on the number of machine sections handled and the gauge of the hosiery. The installation of the single-unit type machine in recent years, coupled with the manpower shortage during the war, stimulated the employment of women as knitters. However, the number of women employed in this group of occupations was still comparatively small in January 1946. Earnings of both men and women knitters (as shown in table 2) were far above those of workers employed in the other key occupations, except for fully experienced machine adjusters and fixers.

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TABLE 2.—*Straight-Time Average Hourly Earnings<sup>1</sup> in Full-Fashioned Hosiery Mills, by Occupation and Sex, Selected Regions, January 1946*

Occupation and sex	United States <sup>2</sup>		Middle Atlantic		Southeast	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
<i>Men</i>						
Adjusters and fixers, knitting machines:						
Over 4 years' experience	700	\$1.52	210	\$1.58	356	\$1.50
Under 4 years' experience	102	1.17	30	1.22	57	1.14
Adjusters and fixers, looping and seaming machines, over 4 years' experience	147	1.22	46	1.20	76	1.23
Boarders, machine	1,127	1.07	500	1.14	468	.97
Carpenters, maintenance	57	.98	24	1.01	13	.84
Dyeing-machine tenders, hosiery	271	.80	108	.86	105	.71
Electricians, maintenance	96	1.06	40	1.00	25	1.10
Janitors	473	.60	142	.65	226	.55
Knitters, footer	1,343	1.54	510	1.73	511	1.28
24 sections or less, below 45 gauge	462	1.31	142	1.55	223	1.20
24 sections or less, 45 gauge and up	416	1.53	158	1.65	150	1.31
26 and 28 sections, below 45 gauge	81	1.68	50	1.80	24	1.43
26 and 28 sections, 45 gauge and up	175	1.71	80	1.82	50	1.38
Over 28 sections, 45 gauge and up	209	1.86	80	2.06	64	1.40
Knitters, legger	4,715	1.34	1,632	1.42	2,058	1.24
24 sections or less, below 45 gauge	1,670	1.17	672	1.28	699	1.09
24 sections or less, 45 gauge and up	2,025	1.38	826	1.45	753	1.26
26 and 28 sections, 45 gauge and up	727	1.49	102	2.02	398	1.29
Over 28 sections, 45 gauge and up	293	1.64	32	1.79	208	1.58
Knitters, single-unit and backrack	9,540	1.47	4,672	1.62	3,620	1.28
Mechanists, maintenance	137	1.10	62	1.02	35	1.17
Maintenance men, general utility	132	.89	42	.96	51	.87
Mechanics, maintenance	58	1.12	30	1.10	11	1.03
Stock clerks	176	.73	90	.71	29	.73
Truck drivers	76	.79	36	.88	24	.68
Truckers, hand	240	.65	60	.68	146	.63
Watchmen	628	.59	264	.59	239	.56
Working foremen, processing departments	223	1.20	72	1.19	86	1.17
<i>Women</i>						
Boarders, machine	1,877	.94	636	1.08	751	.82
Folders and boxers	1,345	.76	598	.82	465	.71
Inspectors, hosiery	2,473	.72	896	.77	1,194	.68
Janitors	85	.57	20	.61	46	.54
Knitters, legger:						
24 sections or less, below 45 gauge	166	.91	10	1.26	100	.97
Knitters, single-unit and backrack	705	1.06	68	1.44	523	1.06
Loopers, toe only:						
Over 1 year's experience	1,497	.82	430	.91	764	.78
Under 1 year's experience	128	.56	32	.62	78	.55
Loopers, toe and heel:						
Over 1 year's experience	1,565	.81	790	.87	536	.71
Under 1 year's experience	186	.60	108	.67	70	.48
Menders, hand	2,182	.78	914	.85	840	.69
Pairs	1,797	.87	858	.92	582	.80
Seamers	5,328	.83	2,174	.92	2,275	.73
Stampers	410	.71	218	.73	153	.68
Stock clerks	196	.64	108	.65	54	.62
Toppers	3,817	.83	1,356	.94	1,590	.70
Working foremen, processing departments	242	.81	78	.86	106	.76

<sup>1</sup> Excludes premium pay for overtime and night work.<sup>2</sup> Includes data for other regions in addition to those shown separately.

## VARIATION BY UNIONIZATION, SIZE OF MILL, AND SIZE OF COMMUNITY

In the Middle Atlantic region, the earnings of men and women in union mills (employing 62 percent of the workers) were 1 and 2 percent higher, respectively, than in nonunion mills. In the Southeast, where only 19 percent of the workers were under union contracts, the organized sector of men averaged 3 percent more and the women 1 percent less than those in nonunion mills.

With few exceptions, workers in the largest mills (over 250 employees) showed a distinct wage advantage. For example, single-



unit knitters (an important occupational group) averaged \$1.60 in the largest mills; \$1.40 in mills with 8 to 50 workers; and only \$1.35 in the intermediate size group.

Size of community also showed a marked correlation with wage levels. To illustrate, on a national basis hourly earnings of single-unit knitters (men) averaged \$1.26 in the towns under 25,000 population; \$1.68 in the cities of over 100,000 population; and \$1.41 in cities of intermediate size. The Middle Atlantic region followed the national pattern fairly closely. In the Southeast, the highest earnings were most frequently observed in cities with 25,000 to 100,000 population; Charlotte and Winston-Salem, with hourly earnings averaging \$1.00 and 97 cents, respectively, fall within this class.

#### WAGE AND RELATED PRACTICES

In January 1946, the 40-hour work schedule was the most prevalent; longer hours for men (usually 45, 48, or 50) were in effect in about two-fifths of the mills studied. Scheduled hours in excess of 40 for women were reported by about a fourth of the mills, with the greatest proportion in the Southeast. Extra shift operations were also reported by 164 out of 187 mills. The differential for second-shift workers (paid by less than half of the mills with extra shifts) was generally 5 cents, added to the hourly rate of first-shift workers.

About a third of the mills (including a larger proportion of those in the Southeast than in the Middle Atlantic States) gave plant workers a bonus, usually at Christmas time. When averaged over all plant workers in the industry, such nonproduction bonuses added less than one-half of 1 cent to the workers' hourly pay. In the important Philadelphia area, only 7 of the 25 mills studied granted bonuses in contrast with 10 of the 13 mills studied in the Winston-Salem area. The amount paid to all plant workers in the latter area averaged 1.1 cents an hour as compared to two-tenths of 1 cent in Philadelphia.

Similarly, insurance and pension plans were more prevalent in Southeastern than in the Middle Atlantic mills. Health and life insurance were most common. With respect to paid vacations, the regional positions were reversed. Less than half of the Southeastern hosiery mills and over four-fifths of those in the Middle Atlantic area granted paid vacations (usually 1 week) to their plant workers. To some extent, this reflects the more extensive unionization in the Middle Atlantic mills, as paid vacations have become a standard feature of union agreements.

#### *Seamless Hosiery*

In contrast with the full-fashioned branch of the industry, straight-time average hourly earnings of seamless hosiery workers were extremely low—58 cents for women and 75 cents for men. The men averaged 3 cents less an hour than women in full-fashioned mills.

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62.5-64.9 ce  
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67.5-69.9 ce  
70.0-74.9 ce  
75.0-79.9 ce  
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The lower level of skill, the predominance of women (almost three-fourths of the total), and concentration in the Southeast are important factors accounting for lower earnings in the seamless branch than in the full-fashioned branch of the industry.

## REGIONAL DIFFERENCES IN WAGE LEVELS

Seamless hosiery mills are concentrated in the Southeastern States. All but 28 percent of the industry's workers were in southern mills; the Middle Atlantic region accounted for 13 percent and the Border States for 8 percent. Relatively few mills were in New England, the Great Lakes area, and the Southwest.

TABLE 3.—Percentage Distribution of All Plant Workers in Seamless Hosiery Mills by Straight-Time Average Hourly Earnings,<sup>1</sup> Selected Regions, January 1946

Average hourly earnings	United States <sup>2</sup>	Middle Atlantic	Border States	Southeast
Under 35.0 cents	(3)	(3)	(3)	(3)
35.0-37.4 cents	0.5		1.1	0.5
37.5-39.9 cents	.1	(3)	.2	.1
40.0-42.4 cents	10.5	3.5	19.9	11.4
42.5-44.9 cents	2.6	2.1	3.9	2.7
45.0-47.4 cents	5.8	3.3	8.5	6.2
47.5-49.9 cents	3.6	1.8	6.4	3.6
50.0-52.4 cents	10.5	8.4	12.0	10.8
52.5-54.9 cents	4.7	3.7	5.8	4.8
55.0-57.4 cents	7.6	14.2	6.1	6.9
57.5-59.9 cents	5.3	4.5	5.0	5.6
60.0-62.4 cents	6.2	6.0	5.0	6.1
62.5-64.9 cents	4.4	4.7	4.0	4.4
65.0-67.4 cents	5.1	5.7	3.4	5.0
67.5-69.9 cents	3.5	4.4	2.2	3.4
70.0-74.9 cents	7.0	10.9	3.4	6.5
75.0-79.9 cents	6.1	7.1	3.0	6.2
80.0-84.9 cents	5.2	5.5	2.6	5.4
85.0-89.9 cents	2.8	3.1	1.3	2.9
90.0-94.9 cents	2.1	2.9	1.8	1.8
95.0-99.9 cents	1.3	1.8	1.0	1.1
100.0-109.9 cents	2.4	2.8	1.2	2.2
110.0-119.9 cents	1.4	2.0	.9	1.2
120.0-129.9 cents	.6	.8	.5	.5
130.0-139.9 cents	.4	.3	.2	.5
140.0-149.9 cents	.1	.2	.2	.1
150.0-159.9 cents	.1	.2	.1	.1
160.0 cents and over	.1	.1	.3	(3)
	100.0	100.0	100.0	100.0
Average hourly earnings <sup>1</sup>	\$0.63	\$0.67	\$0.57	\$0.62
Total number of workers	51,800	6,625	4,175	37,675

<sup>1</sup> Excludes premium pay for overtime and night work.

<sup>2</sup> Includes data for other regions in addition to those shown separately.

<sup>3</sup> Less than .05 of 1 percent.

Regionally and occupationally, earnings varied little from the national pattern. The Middle Atlantic region, as indicated below, tended to pay higher wages than any other area, and frequently earnings in the Border States were below those in the Southeast.

	Average hourly earnings		
	Total	Men	Women
Middle Atlantic:			
Philadelphia	\$0.69	\$0.86	\$0.65
Reading	.65	.77	.62
Southeast:			
Winston-Salem	.69	.79	.64
Chattanooga	.63	.73	.67
Knoxville	.58	.69	.54
Statesville-Hickory	.61	.73	.55

## OCCUPATIONAL DIFFERENCES IN WAGE LEVELS

The great majority of women (71 percent) as against 38 percent of the men averaged less than 65 cents an hour in January 1946. Only 1 percent of the women compared to 16 percent of the men had earnings of \$1.00 or more. Even when employed in the same occupation, men usually had a wage advantage over women, varying from 8 to 50 percent; transfer knitters, alone of all the occupational groups studied, showed the same average earnings of 60 cents an hour for both sexes (tables 3 and 4).

TABLE 4.—*Straight-Time Average Hourly Earnings<sup>1</sup> in Seamless Hosiery Mills, by Occupation and Sex, Selected Regions, January 1946*

Occupation and sex	United States <sup>2</sup>		Middle Atlantic		Border States		Southeast	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
<b>Men</b>								
Adjusters and fixers, knitting machines:								
Over 4 years' experience.....	2,381	\$0.99	275	\$1.02	140	\$0.93	1,831	\$0.99
Under 4 years' experience.....	456	.80	42	.91	63	.79	337	.78
Adjusters and fixers, looping and seaming machines:								
Over 4 years' experience.....	193	.89	41	.94	12	.89	135	.87
Under 4 years' experience.....	53	.79	6	( <sup>3</sup> )	4	( <sup>3</sup> )	43	.78
Boarders, machine.....	2,382	.72	135	.79	134	.69	2,065	.71
Dyeing-machine tenders, hosiery.....	376	.64	31	.82	36	.60	297	.62
Janitors.....	327	.54	16	.59	19	.47	275	.54
Knitters, automatic.....	1,491	.71	46	.82	30	.65	1,380	.71
Knitters, flat-bed.....	85	.80			3	( <sup>3</sup> )	43	.64
Knitters, rib.....	228	.64	30	.67	17	.55	172	.63
Knitters, string.....	151	.67	29	.85	23	.51	94	.64
Knitters, transfer.....	108	.60	10	.67	11	.67	87	.58
Machinists, maintenance.....	45	.96	4	( <sup>3</sup> )	1	( <sup>3</sup> )	26	.83
Maintenance men, general utility.....	135	.81	19	.93	2	( <sup>3</sup> )	89	.76
Stock clerks.....	176	.62	17	.71	15	.58	136	.61
Truck drivers.....	106	.64	16	.77	6	( <sup>3</sup> )	80	.61
Truckers, hand.....	265	.57	17	.59	32	.51	186	.57
Watchmen.....	488	.54	50	.55	19	.52	387	.53
Working foremen, processing departments.....	315	.99	54	1.02	14	.89	190	.96
<b>Women</b>								
Boarders, machine.....	1,674	.61	33	.72	116	.56	1,421	.60
Clippers.....	886	.55	118	.57	78	.48	679	.55
Folders and boxers.....	1,730	.60	330	.60	156	.50	1,155	.62
Hemmers.....	924	.60	234	.65	27	.57	625	.58
Inspectors, hosiery.....	2,695	.58	242	.57	199	.52	2,134	.58
Janitors.....	71	.47	6	( <sup>3</sup> )	3	( <sup>3</sup> )	61	.46
Knitters, automatic.....	2,205	.64	335	.67	94	.57	1,609	.65
Knitters, flat-bed.....	61	.63	6	( <sup>3</sup> )	2	( <sup>3</sup> )	53	.63
Knitters, rib.....	399	.59	162	.65	31	.54	185	.54
Knitters, string.....	757	.62	217	.71	120	.55	389	.58
Knitters, transfer.....	3,554	.60	608	.65	324	.55	2,466	.59
Loopers:								
Over 1 year's experience.....	7,753	.62	1,058	.67	599	.52	5,676	.62
Under 1 year's experience.....	1,238	.46	132	.52	115	.43	887	.44
Menders, hand.....	1,487	.57	202	.60	102	.49	1,011	.56
Palers.....	2,180	.61	243	.60	102	.58	1,741	.62
Stampers.....	804	.59	99	.58	61	.49	596	.60
Stock clerks.....	130	.55	9	( <sup>3</sup> )	11	.61	105	.53
Truckers, hand.....	67	.53	8	( <sup>3</sup> )	5	( <sup>3</sup> )	40	.54
Working foremen, processing departments.....	236	.66	58	.70	10	.64	143	.64

<sup>1</sup> Excludes premium pay for overtime and night work.

<sup>2</sup> Includes data for other regions in addition to those shown separately.

<sup>3</sup> Insufficient number of workers to justify presentation of an average.



## VARIATION BY UNIONIZATION, SIZE OF MILL, AND SIZE OF COMMUNITY

The seamless hosiery industry was less extensively unionized than the full-fashioned branch. About an eighth of the mills studied were operating under union agreements in January 1946; they employed about a sixth of all workers in the industry. Though few in number, union workers had a greater wage advantage in seamless than in full-fashioned hosiery mills. The differential for the industry as a whole was 6 percent; in the Southeast alone, it was 10 percent.

Half of the seamless hosiery mills studied employed 51 to 250 workers, a third had a larger number, and the remainder had 50 or less. Earnings for both men and women tended to be highest in the largest mills. The difference frequently did not exceed 5 cents except for a few jobs in which wages were related to productivity.

In most occupations, workers employed in mills located in cities of 25,000 to 100,000 population were the highest paid. They earned up to 32 percent more than workers in the smallest communities (less than 25,000 persons). Between medium-size cities and metropolitan centers of over 100,000, the wage spread was considerably less in the majority of the key jobs studied.

## WAGE AND RELATED PRACTICES

As in the full-fashioned hosiery branch, the typical workweek in seamless hosiery was 40 hours. In the Southeast, over 10 percent of the mills scheduled 48 hours for men and women alike. A majority of the mills (including four-fifths of those in the Southeast) operated extra shifts but seldom provided a wage differential for late work. Only 23 of the 149 mills reporting extra shifts generally added 5 cents or 5 percent to the first-shift hourly rate for such work.

Over half of the seamless hosiery mills, compared to a third in the full-fashioned branch, gave their workers a nonproduction bonus, usually at Christmas. When averaged over all plant workers in the industry, the bonus added eight-tenths of 1 cent to the hourly rate—twice the amount estimated for full-fashioned hosiery workers.

Although paid vacations and insurance or pension plans are fairly widespread practices in most industries, less than a half of the seamless hosiery mills reported such plans for plant workers. Practically all of these mills allowed 1 week's vacation with pay and provided health- or life-insurance benefits.

## Cooperatives

### Activities of Credit Unions in 1945

THE slight upward trend in business done by credit unions in the United States in 1944, after a serious decline during the war years, was continued in 1945, although the total of loans made was still more than 40 percent below the peak of 1941. This increase took place in spite of a slight reduction in number of loans made, indicating a rise in the average size of loan. Share capital and assets which (notwithstanding the otherwise adverse business experience of the credit unions during the war) have continued to rise steadily, maintained their upward pace in 1945, showing increases of 8.1 and 9.2 percent, respectively. Reserves fell somewhat, however, both in amount and in relation to loans outstanding, declining as regards the latter from 20.7 percent in 1944 to 19.4 percent in 1945.

Both net earnings and dividends paid on share capital increased as compared with 1944. For 1945, credit union members received nearly \$5,900,000 in dividends on their shares.

Because 398 credit unions went out of existence (some of them undoubtedly in war plants now closed) and only 239 were newly chartered, the total number of associations fell from 9,041 at the end of 1944 to 8,882 at the end of 1945. Partly as a result of this, the total membership declined 3.3 percent.

The State-chartered credit unions fared better during the year than the Federal associations.<sup>1</sup> Their membership declined 0.5 percent, as against 6.7 percent for the Federal associations; they increased their business by 0.8 percent, whereas the loans made by the Federal credit unions fell 0.1 percent. The increases in assets of the two groups of associations were 11.0 and 6.1 percent, respectively.

Data on membership and business of credit unions in 1944 and 1945 are given in table 1.

<sup>1</sup> For the State-chartered associations the statistical data on which the present report is based were in most cases furnished to the Bureau of Labor Statistics by the State official—usually the Superintendent of Banks—charged with supervision of these associations. Reports were received from all States except Iowa. For that State and for certain items concerning which some States do not require the associations to report, estimates were made, based on the trend in other States and on the trend of the other items in the same State. All of the information for the Federal credit unions was supplied by the Credit Union Division of the Federal Deposit Insurance Corporation.

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TABLE 1.—Operations of Credit Unions in 1944 and 1945, by States

[Some revisions in 1944 figures, on basis of later reports]

State, and type of charter	Year	Number of associations <sup>1</sup>		Number of members	Number of loans made during year	Amount of loans—	
		Total	Report-ing			Made dur-ing year	Outstanding end of year
All States.....	1945	8,882	8,615	2,838,034	1,511,851	\$210,885,783	\$126,277,698
State associations.....	<sup>2</sup> 1944	9,041	8,702	2,933,507	1,591,132	209,955,479	120,955,395
	1945	4,923	4,858	1,621,409	909,922	132,616,939	91,122,284
Federal associations.....	<sup>3</sup> 1944	4,993	4,907	1,629,706	926,518	131,621,582	86,551,928
	1945	3,959	3,757	1,216,625	601,929	78,268,844	35,155,414
	1944	4,048	3,795	1,303,801	664,614	78,333,897	34,403,467
Alabama.....	1945	78	76	28,258	34,261	4,147,161	1,929,705
	<sup>2</sup> 1944	80	77	26,806	<sup>3</sup> 26,948	3,155,213	1,534,975
Arizona.....	1945	23	22	3,285	<sup>3</sup> 1,367	<sup>3</sup> 339,842	135,613
	1944	24	24	3,419	<sup>3</sup> 1,350	547,043	117,812
Arkansas.....	1945	25	25	3,059	1,824	194,567	113,615
	1944	27	26	2,862	1,085	163,980	86,860
California.....	1945	444	432	<sup>4</sup> 171,391	<sup>3</sup> 78,839	<sup>3</sup> 12,926,276	8,171,810
	1944	451	442	<sup>3</sup> 184,969	<sup>3</sup> 89,047	<sup>3</sup> 13,481,423	7,761,778
Colorado.....	1945	106	102	25,999	<sup>3</sup> 17,312	<sup>3</sup> 2,247,274	1,349,980
	1944	107	100	25,645	<sup>3</sup> 18,259	<sup>3</sup> 2,105,359	1,151,187
Connecticut <sup>4</sup> .....	1945	186	180	75,118	41,755	4,821,201	1,744,467
	1944	185	179	89,517	47,962	5,742,389	1,963,648
Delaware <sup>4</sup> .....	1945	10	9	2,126	1,003	132,166	71,371
	1944	10	9	2,114	1,148	139,085	67,574
District of Columbia.....	1945	112	108	62,095	<sup>3</sup> 33,236	3,825,016	1,976,325
	1944	114	106	66,099	<sup>3</sup> 38,052	3,881,868	2,065,336
Florida.....	1945	160	156	35,202	22,659	3,683,161	2,099,007
	1944	168	162	34,991	25,251	3,248,585	1,774,033
Georgia.....	1945	132	128	33,837	<sup>3</sup> 22,879	<sup>3</sup> 3,090,362	2,068,728
	1944	135	131	34,117	<sup>3</sup> 22,744	<sup>3</sup> 2,886,066	1,896,131
Hawaii <sup>4</sup> .....	1945	96	95	36,112	11,116	2,155,997	930,429
	1944	97	96	37,753	10,076	1,941,163	1,001,467
Idaho.....	1945	31	31	<sup>3</sup> 3,971	1,405	185,467	102,729
	1944	33	31	3,895	1,329	173,653	87,049
Illinois.....	1945	762	758	330,830	<sup>3</sup> 238,519	28,929,683	14,011,222
	1944	766	756	290,032	<sup>3</sup> 226,575	25,698,370	13,135,592
Indiana.....	1945	297	295	<sup>3</sup> 93,502	<sup>3</sup> 44,616	<sup>3</sup> 5,755,008	3,529,359
	<sup>2</sup> 1944	299	294	<sup>3</sup> 97,967	<sup>3</sup> 51,326	<sup>3</sup> 6,278,072	3,378,962
Iowa.....	<sup>3</sup> 1945	195	195	40,779	18,446	2,397,601	1,771,508
	1944	201	196	41,395	18,921	2,420,443	1,825,666
Kansas.....	1945	112	110	25,068	13,056	1,971,470	1,082,077
	<sup>2</sup> 1944	117	111	27,914	<sup>3</sup> 14,423	<sup>3</sup> 1,952,696	1,071,793
Kentucky.....	1945	104	103	<sup>3</sup> 24,582	<sup>3</sup> 16,209	<sup>3</sup> 1,841,919	<sup>3</sup> 1,366,101
	1944	108	107	<sup>3</sup> 26,649	<sup>3</sup> 15,214	<sup>3</sup> 1,752,616	1,366,019
Louisiana.....	1945	131	125	<sup>3</sup> 32,405	<sup>3</sup> 17,008	<sup>3</sup> 2,158,785	1,066,420
	<sup>2</sup> 1944	139	132	<sup>3</sup> 32,241	<sup>3</sup> 17,270	<sup>3</sup> 2,143,350	<sup>3</sup> 1,037,703
Maine.....	1945	38	35	9,273	3,672	450,641	261,743
	1944	44	35	9,080	3,967	441,178	237,840
Maryland.....	1945	64	60	25,109	<sup>3</sup> 17,395	<sup>3</sup> 1,942,507	804,623
	1944	65	60	26,748	<sup>3</sup> 17,458	<sup>3</sup> 1,883,517	784,897
Massachusetts.....	1945	539	535	255,007	<sup>3</sup> 122,570	22,917,547	16,436,055
	1944	537	532	257,260	<sup>3</sup> 122,591	22,654,669	15,466,050
Michigan.....	1945	248	240	108,633	50,172	8,683,432	6,389,549
	<sup>2</sup> 1944	253	241	114,320	<sup>3</sup> 51,950	<sup>3</sup> 8,437,474	5,981,086
Minnesota.....	1945	325	324	65,734	28,713	4,598,703	5,808,028
	<sup>2</sup> 1944	332	329	66,696	<sup>3</sup> 33,389	<sup>3</sup> 3,662,418	5,451,077
Mississippi.....	1945	26	23	<sup>3</sup> 5,553	<sup>3</sup> 4,787	<sup>3</sup> 462,150	191,042
	1944	27	24	6,640	<sup>3</sup> 5,784	<sup>3</sup> 530,087	226,352
Missouri.....	1945	369	340	88,761	<sup>3</sup> 41,887	<sup>3</sup> 4,868,432	3,116,292
	1944	378	359	90,834	<sup>3</sup> 44,328	<sup>3</sup> 5,432,884	3,185,792
Montana.....	1945	40	37	7,175	<sup>3</sup> 2,952	<sup>3</sup> 440,493	261,103
	1944	40	37	6,382	<sup>3</sup> 2,284	<sup>3</sup> 373,912	201,345
Nebraska.....	1945	89	87	19,381	8,795	1,253,906	730,378
	1944	96	88	20,595	9,882	1,320,588	717,155
Nevada <sup>4</sup> .....	1945	4	4	584	108	16,185	9,386
	1944	4	4	562	104	13,004	7,169
New Hampshire.....	1945	16	14	5,698	<sup>3</sup> 3,017	<sup>3</sup> 760,720	640,080
	1944	15	14	6,151	<sup>3</sup> 3,557	<sup>3</sup> 788,041	653,906
New Jersey.....	1945	247	237	99,042	50,390	5,869,257	2,416,596
	1944	240	233	114,225	63,925	6,382,951	2,632,417
New Mexico <sup>3</sup> .....	1945	14	13	1,304	333	46,262	25,220
	1944	14	14	1,324	589	63,358	28,217
New York.....	1945	753	721	258,397	<sup>3</sup> 127,090	<sup>3</sup> 20,785,191	12,608,773
	1944	763	729	279,116	<sup>3</sup> 144,310	<sup>3</sup> 23,601,108	12,898,928
North Carolina.....	1945	195	168	35,471	<sup>3</sup> 17,801	<sup>3</sup> 2,076,429	1,934,614
	1944	173	151	29,387	17,822	2,088,966	1,256,073

See footnotes at end of table.



TABLE 1.—Operations of Credit Unions in 1944 and 1945, by States—Continued

State, and type of charter	Year	Number of associations <sup>1</sup>		Number of members	Number of loans made during year	Amount of loans—	
		Total	Reporting			Made during year	Outstanding end of year
North Dakota.....	1945	93	87	11,766	3,300	\$1,115,835	\$805,445
	1944	97	80	10,589	3,241	738,280	486,812
Ohio.....	1945	583	567	188,522	84,927	11,896,005	6,012,876
	1944	589	575	214,099	97,508	12,317,470	6,311,501
Oklahoma.....	1945	71	66	<sup>2</sup> 16,225	<sup>3</sup> 7,760	<sup>3</sup> 1,330,282	864,512
	1944	75	72	16,513	<sup>3</sup> 7,737	<sup>3</sup> 1,238,328	<sup>3</sup> 710,019
Oregon.....	1945	71	68	12,491	4,420	749,837	531,506
	1944	75	71	13,053	5,135	811,167	544,424
Pennsylvania.....	1945	586	571	213,503	106,331	13,435,747	6,326,211
	1944	587	560	224,151	111,023	13,406,338	6,296,028
Rhode Island.....	1945	36	35	26,648	6,275	2,445,642	4,510,639
	1944	37	34	25,792	7,062	2,023,922	3,781,404
South Carolina.....	1945	35	29	6,922	5,651	416,753	204,162
	1944	39	31	7,688	5,346	427,749	190,507
South Dakota <sup>4</sup> .....	1945	32	32	4,818	1,970	236,954	99,457
	1944	32	32	5,176	2,547	273,901	119,880
Tennessee.....	1945	117	115	33,903	<sup>2</sup> 26,412	<sup>3</sup> 3,788,965	1,578,663
	1944	127	124	34,567	<sup>2</sup> 27,298	<sup>3</sup> 3,581,047	1,428,126
Texas.....	1945	334	319	76,217	<sup>3</sup> 44,953	<sup>3</sup> 6,133,740	3,229,896
	1944	350	328	77,952	<sup>3</sup> 45,870	<sup>3</sup> 5,763,109	3,063,612
Utah.....	1945	64	62	11,375	<sup>3</sup> 10,152	<sup>3</sup> 1,328,692	637,293
	1944	66	65	11,577	<sup>3</sup> 7,625	<sup>3</sup> 1,204,492	567,092
Vermont.....	1945	10	9	1,692	<sup>3</sup> 1,108	<sup>3</sup> 76,395	27,389
	1944	9	9	1,562	1,265	74,947	27,554
Virginia.....	1945	86	83	23,391	16,519	1,619,262	843,257
	1944	91	86	25,396	14,366	1,462,221	901,198
Washington.....	1945	178	174	35,404	<sup>3</sup> 15,846	<sup>3</sup> 1,947,710	1,234,717
	1944	188	180	37,739	<sup>3</sup> 18,999	2,428,191	<sup>3</sup> 1,280,285
West Virginia.....	1945	63	59	15,318	9,839	1,026,200	510,424
	1944	67	60	15,857	<sup>3</sup> 7,983	<sup>3</sup> 764,907	452,887
Wisconsin.....	1945	534	534	144,594	70,319	7,265,449	3,625,734
	1944	551	548	151,509	77,640	7,885,115	3,655,518
Wyoming <sup>4</sup> .....	1945	18	17	2,504	877	155,504	81,569
	1944	19	18	2,582	947	168,766	86,660

<sup>1</sup> Most of the difference between the total number of associations and the number reporting is accounted for by associations chartered but not in operation by the end of the year and associations in liquidation which had not relinquished their charters.

<sup>2</sup> Revised.

<sup>3</sup> Partly estimated.

<sup>4</sup> Federal associations only; no State-chartered associations in this State.

<sup>5</sup> Federal associations only; although State permissive legislation was passed in 1945 no associations had yet been formed under it.

Fifteen States (Alabama, Arkansas, Colorado, Delaware, Florida, Idaho, Illinois, Louisiana, Maine, Montana, Nevada, North Carolina, North Dakota, Rhode Island, and Vermont) showed a membership increase. Their slight gains, however, were not sufficient to overcome the losses in members in the other States.

The prewar level of business was reached or exceeded in 1945 by both State and Federal associations in Alabama, Montana, and Vermont, by the State-chartered associations in Rhode Island, and by the Federal credit unions in Utah.

Data on the financial status of credit unions, by States, is given in table 2.

TABLE 2.—Assets and Earnings of Credit Unions, 1944 and 1945, by States

State, and type of charter	Year	Number of associations <sup>1</sup>		Paid-in share capital	Reserves (guaranty fund, general reserve, etc.)	Total assets	Net earnings	Dividends on shares
		Total	Reporting					
All States.....	1945	8,882	8,615	\$366,201,586	\$24,506,019	\$434,627,135	\$7,839,810	\$5,888,412
	1944	9,041	8,702	338,713,383	25,081,703	397,929,814	5,716,736	5,122,454
State associations.....	1945	4,923	4,858	225,587,624	19,595,211	281,524,015	5,278,300	3,781,036
	1944	4,993	4,907	205,127,236	17,023,389	253,663,658	3,507,152	3,368,794
Federal associations.....	1945	3,959	3,757	140,613,962	4,910,808	153,103,120	2,561,510	2,107,376
	1944	4,048	3,795	133,586,147	8,058,314	144,266,156	2,209,584	1,753,660
Alabama.....	1945	78	76	3,490,315	331,965	3,908,510	94,715	76,509
	1944	80	77	2,753,163	275,891	3,081,166	82,859	62,830
Arizona.....	1945	23	22	340,278	16,331	370,860	7,580	4,908
	1944	24	24	318,418	24,464	349,497	4,908	4,455
Arkansas.....	1945	24	24	280,647	19,108	314,409	6,194	5,841
	1944	28	26	219,261	17,720	232,625	4,932	3,896
California.....	1945	444	432	23,072,165	1,192,163	26,986,463	2,408,543	2,286,432
	1944	451	442	22,313,274	1,487,572	25,910,483	2,407,721	2,250,641
Colorado.....	1945	106	102	3,534,312	193,990	4,017,658	2,77,060	2,53,773
	1944	108	100	2,898,805	229,402	3,354,663	2,72,654	2,51,381
Connecticut <sup>3</sup> .....	1945	186	180	10,886,299	323,390	12,517,942	246,542	170,143
	1944	185	179	12,849,767	548,399	13,575,000	207,095	158,189
Delaware <sup>3</sup> .....	1945	10	9	177,527	9,824	192,605	4,463	4,169
	1944	10	9	161,965	13,305	176,276	3,391	3,208
Dist. of Columbia.....	1945	112	108	5,851,332	500,025	6,613,620	202,550	115,011
	1944	113	106	5,472,271	527,168	6,203,746	170,029	111,651
Florida.....	1945	160	156	5,742,807	228,720	6,191,836	122,329	89,530
	1944	170	162	4,629,791	278,735	5,014,622	2,104,471	2,170,180
Georgia.....	1945	132	128	1,599,847	475,877	5,339,232	2,104,657	2,270,387
	1944	138	131	1,425,875	396,375	4,778,774	2,100,237	2,263,359
Hawaii.....	1945	96	95	9,920,711	245,751	10,558,538	173,028	136,026
	1944	97	96	8,785,479	399,350	9,253,563	158,711	112,905
Idaho.....	1945	31	31	362,180	12,587	382,466	5,009	4,152
	1944	33	31	292,498	17,595	312,947	3,709	3,824
Illinois.....	1945	762	758	47,144,644	2,931,533	51,250,789	938,364	778,743
	1944	766	756	42,522,556	2,924,278	46,606,917	322,849	645,723
Indiana.....	1945	297	295	12,893,396	605,425	14,099,255	2,173,438	2,2134,715
	1944	297	294	12,106,052	869,698	13,217,602	2,161,751	2,2114,888
Iowa.....	1945	195	195	5,278,339	282,273	6,082,772	70,904	45,410
	1944	201	196	5,172,242	281,504	6,037,066	88,595	93,051
Kansas.....	1945	112	110	3,104,637	125,397	3,372,538	2,45,765	2,31,846
	1944	118	111	2,805,222	143,798	3,059,167	2,48,959	2,31,585
Kentucky.....	1945	104	103	1,603,451	237,313	3,777,484	2,43,203	2,28,979
	1944	108	107	2,865,077	215,170	3,304,051	2,42,401	2,28,474
Louisiana.....	1945	131	125	3,135,173	229,695	3,468,822	2,62,663	2,49,444
	1944	145	132	2,775,840	281,554	3,081,504	60,209	40,808
Maine.....	1945	38	35	905,029	80,954	1,021,718	10,333	12,092
	1944	44	35	735,914	82,502	889,104	8,287	10,526
Maryland.....	1945	64	60	2,143,396	234,146	2,522,736	64,802	47,013
	1944	66	60	2,029,995	230,933	2,370,134	56,182	40,431
Massachusetts.....	1945	539	535	34,835,929	4,094,449	48,036,635	1,170,221	4,812,162
	1944	537	532	30,893,107	3,176,049	42,322,457	379,626	609,262
Michigan.....	1945	248	240	1,897,722	866,627	21,265,393	306,032	291,839
	1944	253	241	17,420,056	826,662	19,622,464	320,972	246,189
Minnesota.....	1945	325	324	10,445,037	547,621	14,132,049	195,008	203,950
	1944	365	329	8,995,484	547,967	12,231,282	2,4,745	170,283
Mississippi.....	1945	26	23	394,429	23,759	619,069	21,793	8,361
	1944	27	24	508,580	53,008	589,365	14,262	6,356
Missouri.....	1945	369	340	12,350,600	2,554,521	13,550,872	2,162,124	2,297,497
	1944	378	359	10,490,289	2,601,875	11,592,194	2,160,978	2,295,154
Montana.....	1945	40	37	631,187	18,386	679,020	14,370	10,049
	1944	42	37	460,586	23,642	495,219	8,565	6,486
Nebraska.....	1945	89	87	2,258,249	119,160	2,806,406	39,891	2,29,888
	1944	91	88	2,042,738	135,202	2,567,729	44,475	24,207
Nevada <sup>3</sup> .....	1945	4	4	30,220	1,412	32,588	487	456
	1944	4	4	25,011	1,741	26,764	119	287
New Hampshire.....	1945	16	14	521,102	89,449	1,352,729	32,026	9,896
	1944	15	14	490,954	85,489	1,114,147	28,528	9,966
New Jersey.....	1945	247	237	11,997,931	526,189	13,734,068	268,184	196,245
	1944	241	233	12,027,205	579,566	13,166,766	202,493	171,265
New Mexico <sup>6</sup> .....	1945	14	13	97,912	5,057	104,125	623	816
	1944	14	14	80,794	6,582	87,586	872	862
New York.....	1945	753	721	32,051,449	3,381,877	36,700,864	770,253	558,692
	1944	764	729	31,673,401	3,132,182	36,573,853	682,279	542,878
North Carolina.....	1945	195	168	4,390,565	168,470	6,012,566	32,680	23,266
	1944	173	151	2,796,132	159,545	3,571,806	82,861	37,909

See footnotes at end of table.

TABLE 2.—*Assets and Earnings of Credit Unions, 1944 and 1945, by States—Continued*

State, and type of charter	Year	Number of associations <sup>1</sup>		Paid-in share capital	Reserves (guaranty fund, general reserve, etc.)	Total assets	Net earnings	Dividends on shares
		Total	Reporting					
North Dakota.....	1945	93	87	\$2,153,649	\$38,597	\$2,233,424	\$29,759	\$16,756
	1944	95	80	1,560,501	29,867	1,617,913	17,366	10,325
Ohio.....	1945	583	567	22,665,272	788,602	24,223,640	321,372	278,563
	1944	589	575	22,554,131	1,009,014	24,336,012	288,882	242,121
Oklahoma.....	1945	71	66	954,852	79,711	2,246,601	<sup>2</sup> 43,115	<sup>2</sup> 31,315
	1944	75	72	764,011	86,153	1,812,545	26,130	19,521
Oregon.....	1945	71	68	1,657,161	91,957	1,819,237	27,014	24,054
	1944	75	71	1,585,523	99,714	1,749,892	26,027	21,137
Pennsylvania.....	1945	586	571	22,109,027	831,494	24,033,969	451,817	381,417
	1944	587	560	19,976,363	1,255,130	22,065,186	380,534	331,854
Rhode Island.....	1945	36	35	4,160,685	430,473	10,904,433	149,536	85,942
	1944	37	34	3,713,056	369,780	9,134,996	129,433	75,431
South Carolina.....	1945	35	29	475,998	30,274	537,129	8,278	8,058
	1944	39	31	492,980	44,716	511,540	8,053	6,947
South Dakota <sup>3</sup> .....	1945	32	32	495,777	19,794	531,688	8,402	8,422
	1944	32	32	432,363	34,466	467,914	7,420	7,302
Tennessee.....	1945	117	115	4,285,476	509,368	4,939,793	120,941	97,514
	1944	127	124	3,613,033	367,724	4,253,506	57,534	76,775
Texas.....	1945	334	319	10,680,407	705,052	11,795,192	205,521	168,980
	1944	354	328	9,565,633	839,769	10,634,060	<sup>2</sup> 221,783	<sup>2</sup> 160,116
Utah.....	1945	64	62	1,441,870	72,840	1,612,069	<sup>2</sup> 34,015	<sup>2</sup> 23,674
	1944	66	65	1,291,712	80,718	1,444,259	<sup>2</sup> 32,706	<sup>2</sup> 21,081
Vermont.....	1945	10	9	67,859	2,250	81,164	1,019	48
	1944	9	9	72,201	2,584	75,826	735	398
Virginia.....	1945	86	83	1,623,534	213,237	2,082,280	39,775	36,130
	1944	91	86	1,629,188	316,819	2,159,086	41,094	31,496
Washington.....	1945	178	174	4,354,530	348,999	4,776,410	95,303	80,769
	1944	200	180	4,074,313	371,762	4,467,146	56,318	44,981
West Virginia.....	1945	63	59	1,185,546	109,095	1,413,816	25,913	22,998
	1944	67	60	1,009,311	129,608	1,201,774	24,446	22,913
Wisconsin.....	1945	534	534	17,144,895	1,546,123	19,065,759	395,744	229,798
	1944	551	548	15,110,319	1,453,581	16,871,283	361,551	219,133
Wyoming <sup>2</sup> .....	1945	18	17	292,789	9,141	309,246	6,428	5,334
	1944	19	18	230,943	15,375	246,337	5,489	4,808

<sup>1</sup> Most of the difference between the total number of associations and the number reporting is accounted for by associations chartered but not in operation by the end of the year and associations in process of liquidation which had not relinquished their charters.

<sup>2</sup> Partly estimated.

<sup>3</sup> Federal associations only; no State-chartered associations in this State.

<sup>4</sup> Includes interest paid on deposits by State-chartered associations.

<sup>5</sup> Loss.

<sup>6</sup> Federal associations only; although State permissive legislation was passed in 1945, no associations had yet been formed under it.



## Labor-Management Disputes

### Controversies and Significant Developments, November 1946

**BITUMINOUS coal strike.**—On November 21 practically the entire bituminous coal mining industry was shut down for the second time in 1946 as the miners, members of the United Mine Workers of America (AFL), stopped work because of a dispute between their union and the Federal Government, which had been operating the mines since May 29. The issues involved in the controversy stemmed from a request of the union to reopen the contract which it had signed with the Government at the termination of the 59-day work stoppage in the spring of the year.<sup>1</sup>

The union contended that the reopening provisions of its 1945 contract with the coal operators had been incorporated into the agreement signed by Secretary of the Interior J. A. Krug and UMWA President John L. Lewis. Under that particular provision, the union held it was permitted to submit new wage proposals upon a 10-day notice and, after 15 days of negotiations, to terminate the contract following a 5-day notice. The Secretary of the Interior, on the other hand, took the position that the contract was in full force and effect for the period of Government operation of the mines and could not be unilaterally reopened. Secretary Krug agreed, however, to confer with union representatives, and discussions between union and Government representatives began November 1. Neither Mr. Krug nor Mr. Lewis participated in the initial conferences. The union submitted general demands for wage rate increases, reduction of hours, increased employer contributions to the health and welfare fund, and adjustment of issues relating to foremen and supervisory employees. The union also raised questions of compliance with mining, workmen's compensation, and occupational disease laws.

Later conferences involved both the Secretary of the Interior and the president of the United Mine Workers, but these also did not result in a solution acceptable to the union. Accordingly, on November 15, Mr. Lewis gave formal notice of expiration of the contract as of midnight November 20. The same day (November 15) the Attorney General issued an opinion that the contract signed on

<sup>1</sup> See Monthly Labor Review, June 1946 (p. 915).

May 29 was in effect for the full period of Government operation and could be reopened only by mutual consent of the contracting parties. Three days later, Justice T. Alan Goldsborough, of the Federal District Court of the District of Columbia, issued a temporary order restraining all officials and attorneys of the UMWA from permitting to continue in effect the union notice purporting to terminate the Krug-Lewis agreement of May 29, and scheduled a hearing for November 27. The court order was issued upon application of the Attorney General, who stated that the notice of termination was "in fact and in effect" a call to strike. On November 21 an estimated 340,000 miners were reported idle.

Upon complaint, filed by the Federal Coal Mines Administrator, that the UMWA had violated the restraining order by failing to withdraw the contract expiration notice, the union and its president were cited for contempt of court, and trial was set for November 27. As the trial progressed the district court ruled that the Norris-La-Guardia Act did not apply to the case and on December 3 Justice Goldsborough found the United Mine Workers and its president in contempt of court. The following day (December 4) the union was fined \$3,500,000 and President Lewis \$10,000. The union indicated it would appeal the court's decision, as the Government took further steps to conserve the Nation's dwindling stocks of bituminous coal pending settlement of the controversy and the miners' return to work.

On December 7 the President of the United Mine Workers directed each union member in the bituminous coal districts "to return to work immediately to their usual employment under the wages, working hours, and conditions of employment in existence on and before November 20, 1946." According to the union's president this action was necessary to free the Supreme Court "from public pressure superinduced by the hysteria and frenzy of an economic crisis" and because "public necessity requires the quantitative production of coal during such period."

*Maritime strike settled.*—Final settlement of the three-coast<sup>2</sup> stoppage of licensed maritime workers and longshoremen was achieved when members of the International Longshoremen's and Warehousemen's Union (CIO), the Marine Engineers Beneficial Association (CIO), and the Masters, Mates, and Pilots of America (AFL) ratified agreements reached on November 17 and 18 with the Waterfront Employers Association of the Pacific Coast and the Pacific-American Shipowners' Association.

Substance of the money provisions in the MEBA and MMP agreements with the Pacific-American Shipowners' Association were identical with those reached on the Atlantic and Gulf Coasts by the same unions. Basic wage rates were raised 15 percent, overtime was set

<sup>2</sup> See Monthly Labor Review, November 1946 (p. 778) for settlements on the East and Gulf Coasts.

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at \$1.60 an hour, and the night relief rate at \$1.50. The union security clause of the East Coast contracts for MMP and MEBA provided maintenance of membership for all but masters, and preferential hiring for all but masters in separate bargaining units. On the Pacific Coast the parties worked out special clauses to fit the particular needs of each contract.

The CIO longshoremen's agreement with the West Coast Waterfront Employers' Association provided for hourly increases of 15 cents in basic rates and 22½ cents in overtime rates. Eligibility for future vacations will require only 1,344 hours worked a year instead of 1,500. An impartial three-man Longshore Safety Commission is to be appointed which will submit recommendations for revising the existing safety code.

*Truck drivers' strike settled.*—A 51-day stoppage of truck drivers for the United Parcel Service in the New York City area was settled on November 2 when members of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America (AFL), signed an agreement providing wages of \$56 and \$57 for a 40-hour week.



## Work Stoppages in October 1946

APPROXIMATELY the same number of work stoppages (450) began in October as in September 1946. Somewhat fewer workers (290,000), however, were directly involved in October stoppages than in the preceding month (380,000).

TABLE 1.—*Work Stoppages in October 1946, with Comparable Figures for Earlier Periods*<sup>1</sup>

Period	Work stoppages beginning in the period		Man-days idle (all stoppages)	
	Number	Workers involved	Number	Percent of estimated working time (all industries)
October 1946 <sup>2</sup> .....	450	290,000	4,500,000	0.6
September 1946 <sup>2</sup> .....	450	380,000	5,000,000	.8
August 1946 <sup>2</sup> .....	500	235,000	3,425,000	.5
July 1946 <sup>2</sup> .....	480	185,000	3,300,000	.5
October 1945.....	474	550,500	8,611,000	1.4
January-October:				
1946 <sup>2</sup> .....	4,025	4,095,000	102,725,000	1.6
1945.....	4,258	2,996,400	23,372,000	.3
1944.....	4,347	1,822,400	7,547,000	.1
1935-39 average.....	2,551	1,041,000	14,859,000	.....

<sup>1</sup> All known work stoppages arising out of labor-management disputes involving 6 or more workers and continuing as long as a full day or shift are included in reports of the Bureau of Labor Statistics. Figures on "workers involved" and "man-days idle" cover all workers made idle in establishments directly involved in a stoppage. They do not measure the indirect or secondary effects on other establishments or industries whose employees are made idle as a result of material or service shortages.

<sup>2</sup> Preliminary estimates.



Idleness of workers employed in establishments directly involved in labor-management controversies declined from approximately 5,000,000 man-days in September to 4,500,000 man-days in October. In each of these months widespread maritime strikes accounted for more than a third of the total lost time.

Including disputes continued from earlier months, a total of 750 stoppages were in effect at some time during October. These involved about 450,000 workers.

### *Activities of the United States Conciliation Service, October 1946*

Cases closed in October 1946 by the United States Conciliation Service showed a large increase over the number closed during September. Inclusive of all activities, 1,633 cases involving 605,507 workers were closed in October, as compared with 1,263 cases involving 396,024 workers in September. A break-down of the cases closed in October, by method of handling,<sup>1</sup> follows:

	Cases closed	Workers involved
All methods of handling-----	1, 633	605, 507
Settled by conciliation-----	1, 160	454, 743
Dispute called off-----	93	35, 595
Unable to adjust-----	23	2, 378
Referred to NLRB and other agencies-----	81	31, 368
Referred to arbitration-----	56	44, 158
Consent elections held or union membership verified-----	12	1, 689
Decision rendered in arbitration-----	82	13, 406
Technical services completed-----	11	500
Miscellaneous services-----	79	20, 720

<sup>1</sup> Detailed data on activities of the U. S. Conciliations Service were not available when this issue went to press.

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# Labor Laws and Decisions

## Recent Decisions of Interest to Labor<sup>1</sup>

### *Fair Labor Standards Act*

#### APPLICATION OF VARIOUS EXEMPTIONS

SEVERAL recent decisions of Federal district courts further clarify the applicability of some of the exemptions from coverage provided in the Fair Labor Standards Act.

*Motor carriers.*—Two decisions of a district court in Kentucky applied the rule<sup>2</sup> that the Motor Carrier Act exemption is limited to those employees of motor carriers who spend a substantial part of their time in duties affecting the safety of operation of motor vehicles. Thus, drivers, drivers' helpers, mechanics, loaders, and checkers who were responsible for proper loading were held to be exempt from coverage, while those engaged in unloading, wheeling, and working in the warehouse were not.<sup>3</sup>

*Service establishment.*—In a Texas suit for the recovery of overtime and damages under the act, the court held that a company performing surveys for interstate concerns which are engaged in drilling oil wells is not a service establishment within the meaning of section 13 (a) of the act, which exempts service establishments.<sup>4</sup>

*Retail establishment.*—A coal company sold its products to both domestic and industrial consumers. In a suit brought to enjoin alleged violations of the Fair Labor Standards Act,<sup>5</sup> the Company contended it was exempt from the act as an establishment engaged in retail trade, pointing out that the selling of coal to ultimate consumers has been recognized in the trade as a retail operation. The court, however, ruled that the company was not exempt. Following the decision of the United States Supreme Court in *Roland Electric Co. v.*

<sup>1</sup> Prepared in the Office of the Solicitor, U. S. Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor nor to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached, based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

<sup>2</sup> For discussion of this rule and its application by a circuit court of appeals, see *Monthly Labor Review*, March 1946 (p. 437).

<sup>3</sup> *Walling v. Silver Fleet Motor Express, Inc.*, U. S. D. C. W. D. Ky., Sept. 20, 1946, and *Walling v. Huber & Huber Motor Express, Inc.*, U. S. D. C. W. D. Ky., Sept. 20, 1946.

<sup>4</sup> *Straughn v. Schlumberger Well Surveying Corp.*, U. S. D. C. S. D. Tex., July 22, 1946.

<sup>5</sup> *Walling v. Northwestern-Hanna Fuel Co.*, U. S. D. C. W. D. Mont., Oct. 3, 1946.

*Walling* (326 U. S. 657), the court pointed out that the test is not merely whether the customers are ultimate consumers, but whether the customers consume the product in connection with the production of goods for interstate commerce. Since in this case more than 25 percent of the gross receipts <sup>6</sup> of the company were derived from sales to industrial users, the company was not exempt.

*Seamen.*—A recent decision of a district court in New Jersey <sup>7</sup> established the principle that seamen are exempt from the act not only during the periods in which they are actually engaged in navigation but also during such time as they are engaged in fitting out and repairing the employers' ships.

#### FURTHER CLARIFICATION OF "HOURS WORKED"

Three recent cases shed additional light on the problem of the extent to which nonproductive time may be considered "hours worked" under the Fair Labor Standards Act.<sup>8</sup>

*Travel time.*—Time spent in traveling over the employer's railroad and logging roads from its logging camp to the sites of active logging operations has been held to constitute time worked under the act, for which compensation is due.<sup>9</sup> The court pointed out that, as in the *Mt. Clemens Pottery* case, the travel here involved "physical or mental exertion (whether burdensome or not) controlled or required by the employer and pursued necessarily and primarily for the benefit of the employer and his business."

*Overtime.*—Likewise, in a case <sup>10</sup> in which suit was brought to recover for overtime arising from the fact that the employee's duties included reporting to work early to open the shop, and staying late to close it, the court ruled that time spent in the performance of such duties constitutes "hours worked" under the Fair Labor Standards Act.

*Employee subject to call.*—On the other hand, a case arose in which an ice-plant engineer was subject to 24-hour call to repair break-downs of equipment, although during the time he was absent from the plant he was free to go where he pleased, so long as he kept the plant informed of his whereabouts. The court held that his time away from the plant did not constitute "hours worked."<sup>11</sup> It sustained the contention of the lower court that the employee was not "engaged to wait" but rather was "waiting to be engaged."

<sup>6</sup> The 25 percent tolerance for companies engaged in both retail and nonretail operations was established by the Wage and Hour Administrator and was approved by the court in the *Roland* case, *supra*.

<sup>7</sup> *Walling v. Keansburg Steamboat Co.*, U. S. D. C. N. J., Sept. 3, 1946.

<sup>8</sup> See *Anderson v. Mt. Clemens Pottery Co.*, — U. S. —, June 1946, discussed in Monthly Labor Review, August 1946 (p. 249).

<sup>9</sup> *Walling v. Anaconda Copper Mining Co.*, U. S. D. C. Mont., Aug. 2, 1946.

<sup>10</sup> *Spilky v. Meyer Rein & Co.*, U. S. D. C. N. D. Ill., Oct. 17, 1946.

<sup>11</sup> *Dumas v. King* (C. C. A. 8th), Oct. 11, 1946.

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### *Veterans Reemployment*

*Officer-employees.*—In two recent district court cases the courts have been faced with the problem of the reemployment rights of officer-employees in two distinguishable factual situations.

In one case <sup>12</sup> the veteran had, prior to his induction, been an employee (office manager and purchasing agent) as well as an officer (treasurer and director) of the company. During his absence in the service the position of the company had not changed. The court ruled that the denial to him of reemployment as office manager was illegal. In the second case, <sup>13</sup> however, during the absence in service of a veteran who had been vice president and director, the company had undergone a reorganization as a result of which business operations to which the veteran had clearly indicated hostility were adopted. In holding that the veteran was not entitled to reinstatement, the court relied not only on the "unreasonableness" of such reinstatement <sup>14</sup> but also on the argument that "his (the veteran's) right to be a director or vice president of the defendant is not one which this court has power to decree, for that is something in the hands of the stockholders."

### *National Labor Relations Act*

*Free speech and coercive statements.*—A decision of the Federal Circuit Court of Appeals for the Sixth Circuit <sup>15</sup> supports the position frequently taken by the National Labor Relations Board concerning the extent to which antiunion statements by employers or their representatives are protected by the first amendment to the Constitution. In that case a manager who had authority over employees' jobs and wages stated that the employees were "sticking their necks out" if they joined the union. The court, in upholding the ruling of the Board that there had been interference, pointed out that an employer is protected by the free speech amendment only if the statements are noncoercive, and that in this case "the reasonable inference is that a threat of discharge or discrimination is intended."

*Timely notice of elections.*—Two recent decisions of the National Labor Relations Board clarify the requirements of notice in cases in which an election is directed.

In one case <sup>16</sup> the copies of the election notice had been mailed to the company and the union, but had not been received by the company until a day after the election was held. The Board ruled, in

<sup>12</sup> *Van Doren v. Van Doren Laundry Service, Inc.*, U. S. D. C. N. J., Sept. 3, 1946.

<sup>13</sup> *Houghton v. Texas State Life Insurance Co.*, U. S. D. C. N. D. Tex., Oct. 1, 1946.

<sup>14</sup> See a similar ruling in *McClayton v. W. B. Cassell Co.*, discussed in *Monthly Labor Review*, August 1946 (p. 253).

<sup>15</sup> *National Labor Relations Board v. Hal Peterson, et al.* (C. C. A. 6th), Oct. 16, 1946.

<sup>16</sup> In re *Hunt Foods, Inc.*, 70 NLRB No. 128, Sept. 12, 1946.

setting aside the election, that the fact that the union had notified some of the employees, and the newspapers had carried an item on the election, was not sufficient to remedy the lack of timely notices of election.

In the second case,<sup>17</sup> however, the Board sustained the results of an election held, over the objection of the employer that "the majority of the people involved did not have time to think the matter out \* \* \*," because in this instance it was shown that an election had been scheduled a month before but postponed and as a result the eight or nine employees in the small unit must have known, long before it was actually held, that an election was to be conducted.

*Effect of existing contract on new determination of representatives.*—Where negotiations in process under an existing collective-bargaining agreement are so broad in scope as to constitute a complete reopening of the contract, the Board held that such a contract will not operate as a bar to a new determination of representatives.<sup>18</sup> The Duquesne Light Co. had a contract with an independent union which provided for automatic renewal and also provided that "without cancelling the agreement" either party could serve written notice within 60 days of the renewal date, requesting changes in the contract. Within the stipulated period the parties requested changes in the contract. In the ensuing negotiations a draft of a new contract was presented by the independent union, and various proposals and counter-proposals on substantive matters not covered in the old contract were made. At this point the United Mine Workers of America filed a petition for certification which the independent union contended was barred by the contract. The Board, however, held that, in the light of the scope of the renegotiations then in process, the contract did not bar a determination of representatives.

*Past membership requirement in closed shop agreements.*—The National Labor Relations Board has recently held<sup>19</sup> that the closed-shop provision of the National Labor Relations Act does not sanction contracts which require past membership in the union as a condition of future employment. In this case the union contract contained a maintenance-of-membership clause which required as a condition of future employment that employees must have maintained membership in the union for a specified period of time. The period, however, included time when no contract between the union and the employer was in effect. The Board held this provision invalid and not protected by the closed-shop sanctions of the act.

<sup>17</sup> In re *United States Gypsum Co.*, 70 NLRB No. 131, Sept. 12, 1946.

<sup>18</sup> In re *Duquesne Light Co.*, 71 NLRB No. 47, Oct. 11, 1946.

<sup>19</sup> In re *Colonie Fibre Co., Inc.*, 71 NLRB No. 50, Oct. 14, 1946.

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### *War Labor Disputes Act*

*Liability of individuals for refusing to work during "cooling off period."*—A Federal District Court has for the first time ruled on the question of whether the terms of the Smith-Connally Act subject an individual to liability for damages if he refuses to work during the 30-day period following the filing of a strike notice. In this case<sup>20</sup> the company, suing three employees for "willfully refusing to continue production" during the 30-day period, relied on section 8 (a) (2) of the act, which provides that during this period "the contractor and his employees shall continue production under all conditions which prevailed when the dispute arose except as modified by mutual agreement or by decision of the court." After examining the basic purpose of the act and its legislative history, the court held that section 8 (a) (2) was designed to prevent the calling of an official strike during the 30-day period, but does not deprive the individual worker of the right or privilege to leave the job on his own initiative. The court said: "It is difficult to believe that section 8, the heart of which is to place in the hands of the rank and file of American labor the privilege and responsibility to decide of their own violation whether there shall be strikes, was meant to deny the right of the individual to cease production—a right not denied even against the Government."

### *Decisions of State Courts*

*Massachusetts referendum on union-control laws.*—Pursuant to Massachusetts statutes, initiative petitions were recently filed to submit two union-control laws to the voters at the State elections. The first of these would prohibit labor unions from making political contributions in any form. The second would require labor unions to file annual reports subject to public scrutiny as to names and addresses of officers, salaries, scale of dues, initiation fees, and assessments, amounts collected, and all expenditures.

Suit was brought by the president of the Massachusetts State Federation of Labor and five other petitioners to prevent the submission of these two proposed laws to public vote.<sup>21</sup> The Massachusetts Supreme Judicial Court held that the first proposed law could not properly be submitted because, if enacted, it would interfere with freedom of speech, liberty of the press, and the right of peaceable assembly. The court pointed out that the political activity of labor unions, like that of individuals, may be curbed by corrupt practices acts "but under the proposed law the political activities of labor unions are not regulated or curbed but are substantially destroyed."

<sup>20</sup> *France Packing Co. v. Dailey*, U. S. D. C. E. D. Pa., Sept. 23, 1946.

<sup>21</sup> *Bowe, et al. v. Secretary of the Commonwealth*, Mass. S. J. C., Sept. 20, 1946.



The second proposed law, however, was declared proper for submission, the court saying that "these mild regulations would be amply justified in the constitutional sense by the great power wielded by a labor union, and its capacity for harm if that power should rest in irresponsible hands and be exercised without public scrutiny."

*California "hot cargo" statutes.*—The lower courts in California continue to disagree over the constitutionality of the State "Hot Cargo" Act, which outlaws sympathetic strikes and secondary boycotts for the duration of the war.<sup>22</sup> In two cases which came before it recently, the Superior Court for Los Angeles County held the act constitutional and effective until the official end of the war. In one of these cases<sup>23</sup> the complaint by the publisher of a shopping-news publication alleged picketing by a central labor council to induce the publisher to refrain from dealing with a printing establishment engaged in a labor dispute. In the second case<sup>24</sup> the complaint alleged that members of a delivery drivers' union engaged in a labor dispute had picketed the premises of a supplier of the plaintiff to prevent shipments to him. In both cases the court held the acts illegal under the "Hot Cargo" Act, and supported the constitutionality of the act as a proper exercise of the State's police power in the face of "clear and present danger."

On the other hand, the Superior Court for Humboldt County refused to enjoin the peaceful picketing of a railroad by employees of a lumber company, one of the railroad's customers, with which they were engaged in a labor dispute.<sup>25</sup> While specifying that it was not passing on the constitutionality of the "Hot Cargo" Act in its entirety, the court held the act unconstitutional insofar as it can be interpreted to outlaw all peaceful picketing.

<sup>22</sup> See Monthly Labor Review, July 1946 (p. 102).

<sup>23</sup> *Los Angeles Down Town Shopping News, Corp. v. Los Angeles Central Labor Council, et al.*, Sup. Ct. Los Angeles County, Aug. 27, 1946.

<sup>24</sup> *Farmer Bros. v. Wholesale Delivery Drivers and Salesmen Union Local 596*, Sup. Ct. Los Angeles County, Sept. 17, 1946.

<sup>25</sup> *Northwestern Pacific Railroad Co. v. Lumber and Sawmill Workers Union, et al.*, Sup. Ct. Humboldt County, Sept. 10, 1946.

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## *Prices and Cost of Living*

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### **Decontrol of Prices and Wages<sup>1</sup>**

THE abandonment of all remaining price ceilings, except those for rents, sugar, and rice, was announced by the President on November 9, 1946. At the same time, an Executive order provided for the end of wage and salary controls, as: "The removal of price controls leaves no basis or necessity for the continuation of wage controls, which have operated, in most industries, only as an adjunct to price controls." In taking such action, the President stated that "general control over prices and wages is justifiable only so long as it is an effective instrument against inflation. I am convinced that the time has come when these controls can serve no useful purpose. \* \* \* that their further continuance would do the Nation's economy more harm than good."

Following the President's report of October 14, regarding the meat shortage and the general stabilization program, meat had been decontrolled and the lifting of other controls had been accelerated. As a result, it was pointed out, practically all foods and many other commodities had been freed from Federal control. Therefore, to retain the remaining controls would have led, in the judgment of the Price Administrator, "to distortions in production and diversions of goods to an extent far outweighing any benefit that could be achieved." In addition, the President stated, existing conditions were more favorable for the return to a free economy than those in existence "when the present badly weakened stabilization law was finally enacted by the Congress."<sup>2</sup>

<sup>1</sup> Data are from White House release of November 9, 1946, and Federal Register, Vol. 11, No. 221 (p. 13435).

<sup>2</sup> For a brief statement on the amended Emergency Price Control Act of 1942 and the Stabilization Act of 1942, as amended on July 25, 1946, see Monthly Labor Review, November 1946 (p. 832).

Reasons cited for the retention of rent ceilings were the extreme shortage of housing, which was expected to continue for a long time, and the fact that tenants were in no position to protect themselves against extortionate demands. If rents were fixed by ordinary methods, hardship would result. The President added: "It may be that some adjustment of rents will be required, but control of rents and control over evictions must be continued." Regret was expressed that it was not possible to retain price controls on building materials to facilitate the veterans' emergency housing program. To maintain them would have meant that the raw materials needed for housing and for alternative uncontrolled products would be utilized for the latter purposes. The only other control retained was "that necessary to implement the rationing and allocation programs of sugar and rice."

Wage and salary controls which were removed consisted of those that were authorized by the Stabilization Act of 1942, and in recent months had been administered in large part by the National Wage Stabilization Board (established by Executive order of December 31, 1945).<sup>3</sup> This action did not affect "the statutory provision governing changes in terms and conditions of employment in plants operated by the Government pursuant to the War Labor Disputes Act."<sup>4</sup> Responsibility also remained for the disposition of pending cases involving alleged violations of wage controls before November 9.

The Bureau of the Budget was asked to prepare plans, in consultation with the agencies involved, for the reduction of operations resulting from decontrol. In closing his statement, the President said: "Today's action places squarely upon management and labor the responsibility for working out agreements for the adjustment of their differences without interruption of production."

<sup>3</sup> For summaries of provisions of Executive orders affecting wage control see Monthly Labor Review, March 1946 (p. 397), April 1946 (p. 538), May 1946 (pp. 833, 836).

<sup>4</sup> For summary of provisions of this act see Monthly Labor Review, August 1943 (p. 305).



## Prices in the Third Quarter of 1946

THE price advance during the third quarter of 1946 was greater than the entire increase from the hold-the-line order in the spring of 1943 to June 1946. Led by a record increase of 19.6 percent for foods, consumers' prices rose 9½ percent during the quarter; wholesale prices advanced 9.8 percent. Both primary market and retail prices reached the highest levels since late 1920.

The dominant influence during the quarter continued to be the huge effective demand from consumers and industry for goods and services, supported by the high level of national income. Income payments to individuals of about 167 billion dollars, civilian employment of 58 million, farm income and business profits after taxes, all were higher than ever before.

The greatly reduced level of Government spending after the end of the war was offset by a substantial rise in net foreign purchases and purchases of producers' durable goods, and by an increase in the rate of consumer expenditures. Total volume of foreign trade continued at high postwar levels during the third quarter. The revaluation of currencies in Canada and Sweden increased these countries' ability to purchase in American markets.

The annual rate of expenditure for consumer goods and services during the third quarter amounted to 126 billion dollars with an increasing proportion represented by consumer durable goods. There appeared to be a leveling off in the physical volume of purchases of nondurable goods and some indication of consumer resistance to high prices and poor quality of such goods.

Demand for many products still far exceeded supply, although total production reached an annual peacetime peak of 172 billion dollars and marketings of goods were increasing. Production of services, foods, and other nondurable consumer goods in the third quarter were far above prewar rates. Output of many durable goods surpassed peacetime highs but production of automobiles, refrigerators, and sewing machines was still below the 1941 level. Housing was critical and nonresidential construction was curtailed to meet the needs of the housing program.

The following table shows percentage changes in consumers' prices and in primary market prices for selected periods.

From June 30 to July 25 all goods and services, except rents, which were controlled by local ordinances in some areas, and utilities and other public services, normally regulated by other agencies, were free of price control. The threat of resumption of controls remained as a partial check. On July 25 the Price Control Extension Act of 1946 extended price controls for 1 year and with certain exceptions restored

controls which had been in effect on June 30. Congress expressed the desire to terminate general control of prices and the use of subsidies as rapidly as possible. The act also exempted a large proportion of agricultural products from price control at least until August 21, 1946, and specified that only those commodities, certified by the Secretary of Agriculture as being in short supply, could be continued under price control.

Under the decontrol policy OPA moved rapidly during the quarter to remove controls. In late September only about 71 percent of all items in the wholesale price index, excluding gas and electricity, 62 percent of items in the consumers' price index, and 55 percent of retail food prices remained under OPA control.

The new act also contained a number of important provisions which resulted in price increases during the quarter. It specified that maximum prices must cover increases in average costs since 1940 and guaranteed distributors' margins in effect on March 31, 1946. Weighted average price regulations were forbidden. The Bankhead-Brown Amendment specified that maximum prices for cotton and wool products must cover raw material costs, mill conversion costs, and a reasonable profit.

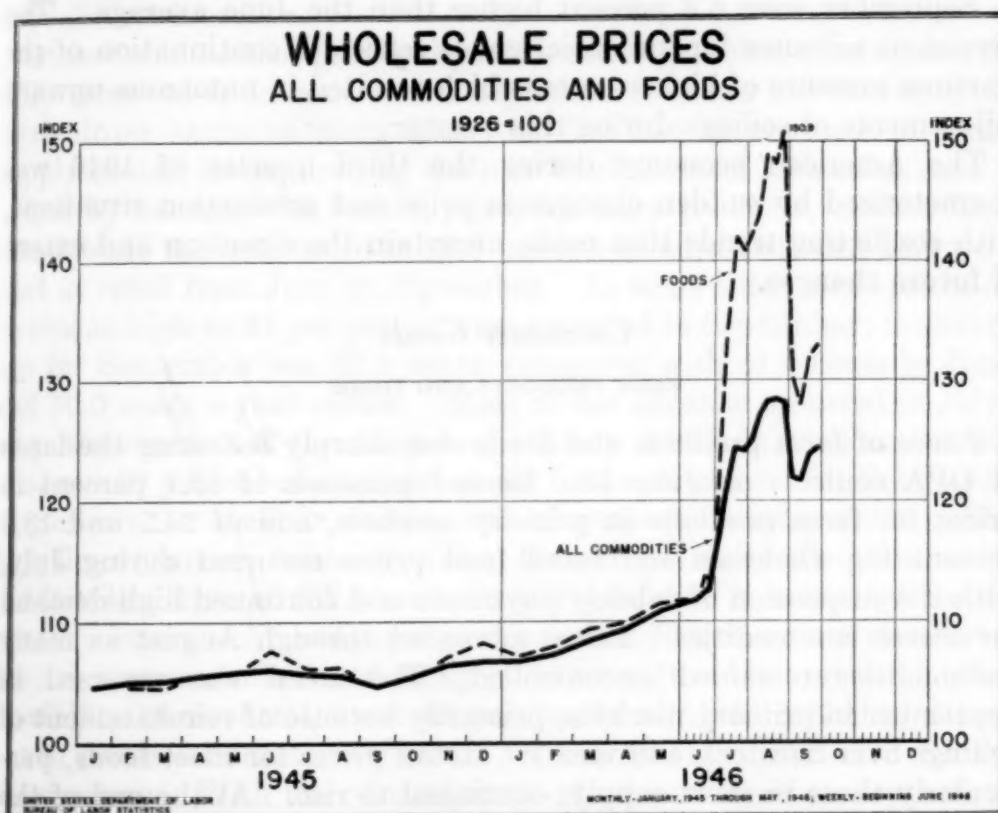
*Percent of Change in Consumers' Prices and in Primary Markets, in Specified Periods<sup>1</sup>*

Commodity group	Percent of change					
	In last quarter, June 1946 to Sept. 1946	From end of war, Aug. 1945 to Sept. 1946	In last year, Sept. 1945 to Sept. 1946	From hold-the-line order, <sup>2</sup> May 1943 to Sept. 1946	From wage base date, Jan. 1941 to Sept. 1946	From month before war in Europe, Aug. 1939 to Sept. 1946
Consumers' prices: All items.....	+9.5	+12.8	+13.2	+16.6	+44.7	+48.0
Food.....	+19.6	+23.6	+24.9	+21.7	+78.4	+86.2
Clothing.....	+5.5	+13.3	+11.9	+29.7	+63.9	+65.4
Rent.....	+0.3	.....	+0.5	+0.7	+3.6	+4.3
Fuel, electricity, and ice.....	+3.5	+2.7	+3.3	+6.3	+13.5	+17.3
Gas and electricity.....	-0.4	-3.7	-3.7	-4.6	-5.9	-7.4
Other fuels and ice.....	+6.3	+7.3	+8.6	+15.0	+31.2	+41.7
Housefurnishings.....	+6.1	+13.4	+12.8	+32.4	+65.3	+64.6
Miscellaneous.....	+1.6	+4.3	+4.3	+12.7	+27.6	+29.4
Primary market prices: All commodities.....	+9.8	+17.3	+17.9	+19.1	+53.5	+65.3
Farm products.....	+10.1	+21.6	+24.1	+22.8	+115.5	+153.0
Foods.....	+16.8	+24.0	+25.7	+19.4	+79.0	+96.3
Hides and leather products.....	+15.7	+20.0	+19.3	+20.2	+38.3	+52.8
Textile products.....	+15.1	+26.2	+25.6	+29.1	+67.2	+85.4
Housefurnishings goods.....	+2.9	+8.7	+8.6	+10.6	+27.6	+32.7
Fuels and lighting materials.....	+7.4	+11.2	+12.1	+16.7	+30.8	+29.9
Metals and metal products.....	+1.8	+9.1	+8.9	+10.0	+16.9	+22.5
Building materials.....	+3.0	+13.6	+13.4	+21.1	+34.3	+49.3
Chemicals and allied products.....	+2.1	+3.3	+3.3	+3.8	+25.2	+32.6
Miscellaneous commodities.....	+3.7	+7.7	+7.7	+11.1	+32.4	+39.3
All commodities, except farm products and food.....	+6.3	+12.3	+12.4	+16.0	+33.1	+40.1

<sup>1</sup> In comparing retail and primary market price movements, the following differences between the consumers' price and primary market price indexes must be noted: The primary market index is based on prices of selected commodities of unchanged specifications in major trading centers, which are considered representative of all commodities. The consumers' price index is based on prices of selected goods and services purchased by moderate-income families in large cities and reflects in part the effect of disappearance of lower-priced articles.

<sup>2</sup> The President's hold-the-line order was issued April 8, 1943. The price rise which had led to this order reached a peak in May, which is, therefore, used for this comparison.

During the quarter there were significant differences in the extent and timing of price rises for different commodity groups. Immediately after June 30, there were sharp increases in primary market prices, particularly agricultural commodities. Prices for 28 raw materials, traded on organized exchanges, jumped 25 percent in the first 17 days of July. The Bureau's comprehensive price index of nearly 900 commodities averaged 10 percent higher in July than in June—the largest monthly advance in the history of the series. Record increases occurred for farm products, foods, and hides and leather products. Retail prices of consumer goods and services increased 5.8 percent between mid-June and mid-July, with a 13.8-percent rise in retail food prices.



Although there were substantial increases for a few scarce industrial goods, manufacturers of nonagricultural commodities generally held prices at June 30 ceiling levels, or slightly higher levels already under consideration, pending final action on OPA legislation. Retail prices of living essentials other than foods increased only 0.3 percent on the average between June and July.

In the first few weeks after restoration of OPA (July 26) prices continued to rise, although the rate of advance was reduced considerably and prices of a few commodities were rolled back to former ceilings. The new price control law left important foods uncontrolled and prices of agricultural commodities reached peak levels in late August.



Wholesale prices of most other commodity groups also increased, reflecting ceiling adjustments required by the provisions of the new act.

After restoration of controls on livestock and meats in early September at levels higher than on June 30, but considerably below the level of uncontrolled prices, wholesale prices dropped sharply. Average primary market prices declined 5.1 percent in the first 2 weeks of September; however, the average for September was 4.0 percent below August, but 9.8 percent higher than in June before suspension of controls.

In contrast to the sharp fluctuations for agricultural commodities, prices for industrial goods rose steadily throughout the quarter and in September were 6.3 percent higher than the June average. The persistent advance for industrial goods reflects a continuation of the wartime pressure of higher costs, which resulted in numerous upward adjustments of ceilings during this quarter.

The American economy during the third quarter of 1946 was characterized by sudden changes in price and production situations, with conflicting trends that make uncertain the direction and extent of future changes.

### *Consumer Goods*

#### FARM PRODUCTS AND FOODS

Prices of farm products and foods rose sharply following the lapse of OPA controls on June 30. Record increases of 12.1 percent in prices for farm products in primary markets, and of 24.2 and 13.8 percent for wholesale and retail food prices occurred during July, with the suspension of subsidy payments and continued high demand for scarce commodities. Prices advanced through August as many commodities remained uncontrolled. The trend was reversed in September in primary markets, primarily because of reinstatement of ceilings over livestock and meats. Retail prices for most foods, particularly those in short supply, continued to rise. At the end of the third quarter, prices for farm products and wholesale foods were 10.1 and 16.8 percent above June levels and double those existing prior to World War II. With the exception of many fresh fruits and vegetables, in seasonally abundant supply, these higher price levels were shared by all major commodity groups.

General price uncertainty and confusion characterized food markets. Contributory causes were the delay in reenacting price control legislation and, later in the quarter, the simultaneous emphasis upon decontrol and a possibility of recontrol if prices rose unreasonably. The revival of OPA on July 25 automatically returned to June 30 ceilings, commodities representing approximately 37 percent of the average family food budget; namely, cereals and bakery products,

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fruits and vegetables, imported foods, sugar, and sweets. An additional 55 percent was specifically exempt until August 21, pending a final decision by the Price Decontrol Board. These items included livestock, meats, poultry and eggs, dairy products, grains, cottonseed, soybeans, and their products. Ceiling increases to cover higher raw material and labor costs were allowed for many commodities restored to control on July 25.

On August 20 resumption of price controls over livestock, meats, cottonseed, soybeans, flaxseed, and products was ordered by the Decontrol Board. Subsidies for meats were reinstated at previous rates, but those on dairy products, flour, the major processed vegetables, dried prunes, raisins, dry beans, coffee, soybeans, and flaxseed, were discontinued.

Other commodities, principally fruits and vegetables, were automatically removed from controls on September 1, when the Secretary of Agriculture excluded them from the first list of products in short supply issued, as required by the new Price Control Extension Act.

Led by increases for butter, prices for dairy products, uncontrolled throughout the quarter, rose 32.8 percent at wholesale and 26.4 percent at retail from June to September. In some cities retail prices of butter as high as \$1 per pound were reported in September; the average for September was 82.9 cents, compared with 61.0 cents in June and 50.0 cents a year earlier. Most of the advance occurred in July, after termination of the dairy feed subsidy, which in June amounted to about 20 percent of retail prices for butter, 8 percent for fluid milk, 13 percent for cheddar cheese, and 11 percent for evaporated milk. Supplies of butter, formerly scarce, became generally adequate.

After the lapse of OPA controls and subsidies, livestock prices at primary markets climbed rapidly—more than 29 percent in 2 months—despite unprecedented marketings. As a result of high prices and the possibility of recontrol, livestock previously withheld, including many not in prime condition, swelled the volume generally marketed during the summer. With the reinstatement of price controls on September 1, marketings dwindled to a new low. The new ceilings, ordered by the Secretary of Agriculture as a production incentive, were set above June levels but considerably below August quotations. Livestock prices declined 15 percent in September; wholesale meat prices, which had risen nearly 80 percent between June and August, dropped 34 percent—more than any other commodity group. Retail meat prices were over 39 percent higher in August than earlier in the year. New retail ceilings established September 10 were 20 percent lower than in the previous month; but beef, pork, and veal generally were unavailable.

As meat supplies fluctuated between extremes, demand for meat substitutes, such as poultry, fresh fish, and eggs also varied, weakening

somewhat in July and August and gaining strength in September. At retail, during the severe meat shortage in September, poultry and fish prices rose 5 percent, while egg prices moved upward more than 11 percent.

Fruits and vegetables declined as a group, with seasonally lower prices for fresh produce such as onions, potatoes, lettuce, carrots, and apples. Prices for canned and dried fruits, and vegetables increased somewhat, reflecting continued heavy demand.

Prices for grains, which had been particularly scarce, rose 19 percent in July. During August demand abated because of recontrol uncertainty and decreased need for livestock feed. Prices declined somewhat, holding fairly steady at this lower level through September, with seasonably higher marketings and estimates of record crops. Although grains remained free of ceilings, cereals and bakery products were recontrolled in late July. Because of the termination of the flour subsidy (amounting to \$1.03 per hundred pounds of flour at wholesale and 1 cent per pound at retail) and increased costs for raw material, labor, and freight, ceilings later were raised. Over the quarter, prices for cereals and bakery products moved up 25 percent at wholesale and more than 12 percent at retail.

There was little trading in seasonally scarce edible vegetable oils. During the brief absence of controls, wholesale prices for refined lard at Chicago reached 32.9 cents per pound in August (compared to 14.8 cents in June). No important sales were reported after ceilings were restored at 19 cents in September.

June ceilings, reinstated on imported commodities on July 25, were soon forced upward. Sugar prices, under an agreement with Cuba, which links purchase prices to the Bureau of Labor Statistics retail price indexes, rose 2.5 percent at retail over the quarter. Coffee ceilings were increased in mid-August, to improve the competitive position of importers and compensate them for the loss of the 3 cents per pound subsidy.

#### HIDES AND LEATHER PRODUCTS AND TEXTILE PRODUCTS

Prices for hides and leather and cotton goods increased sharply with the suspension of OPA controls at the end of June but prices for most other textile products remained at June 30 levels. Many retailers made public announcements that they would not raise their prices until forced to do so by higher costs and most manufacturers refrained from instituting price increases until the final status of price control had been determined.

From June through September average prices of textile products in primary markets advanced 15 percent. Cotton goods rose 19½ percent; woolen and worsted goods, 1 percent; clothing, 2 percent; and hosiery and underwear, 17 percent. Quotations for rayon and nylon yarns and staple fiber remained unchanged.



The cost of clothing purchased by moderate-income families advanced 5.5 percent between June and September. Cotton clothing prices increased 7.6 percent; woolen clothing, priced in the fall and winter months, was 3.6 percent higher than last season. In September, retail costs of clothing were more than one and one-half times as high as in September 1939.

Quotations for raw cotton rose almost uninterruptedly throughout the quarter. From a level of 31 cents early in July prices had risen more than 22 percent by the end of September to the highest point in over 20 years. Strong demand and reports of the shortest crop in many years helped to stimulate the market.

After the extension of price controls at the end of July, OPA granted three successive increases in maximum prices of cotton goods to cover higher raw cotton and labor costs—17 percent early in August and  $2\frac{1}{2}$  and 2 percent respectively on August 30 and September 18. The Price Control Extension Act of 1946 provided that prices for cotton products must reflect either parity or the current market price for raw cotton, whichever is higher, as well as current conversion costs.

The price of domestic raw wool, 14 to 23 percent lower than a year ago, because of reductions in selling prices by the Commodity Credit Corporation to encourage the use of domestic wools, showed no change over the quarter, although ceilings were removed in September. The Commodity Credit Corporation remained the sole purchasing and selling agent for practically all domestic wool, selling to mills at prices lower than it paid growers.

During July, over 5,000 bales of raw silk were sold at prices varying from \$16.50 to \$6.78 per pound. The July quotation on the 13/15 denier D grade was about 142 percent above prewar. Only a small proportion of silk offered was sold at the August auction, and at prices considerably lower than the first sale. The September sale was held on open auction, but "upset prices" were established by the Government below which bids would not be accepted. About 5,000 bales were sold, at prices ranging from \$6.20 to \$13.50.

Manufacturers' and retailers' prices for apparel generally increased as costs of fabric and labor rose and new ceilings were established for most articles. Retail prices of women's garments continued to advance although retailers reported consumers were becoming more selective in the choice of fabrics. Stocks of tailored rayon slips failed to meet consumer demand as manufacturers continued to produce a greater proportion of lace-trimmed undergarments selling at higher prices. Women's coats, utilizing higher quality fabrics in some cases, were higher than last season.

Manufacturers' prices of men's and boys' clothing increased from 10 to 24 percent. Retail prices of men's suits, topcoats, and overcoats increased as higher labor and trimming costs were passed on to

the consumer. Overalls, work shirts and work trousers, business shirts, woven shorts, knit undershirts, and rayon hose also were higher.

Women's silk hosiery was available at many retail stores but at prices ranging from \$1.95 to \$4.50 a pair, well above prices for the more durable nylon.

Market prices of hides and skins soared nearly 40 percent in July and declined only 8 percent after ceilings had been restored. As a group, prices of hides and skins averaged higher during July 1946 than at any time since September 1920. Imported goatskins led the July upswing as trading in foreign skins returned to a fully competitive basis. Tanners' eagerness to acquire raw stock doubled prices within a few weeks after the RFC ceased to regulate imports, and sustained goatskin prices at high levels throughout the third quarter. Quotations for domestic cattlehides and calfskins advanced over 35 percent during the July interim between controls to levels comparable with those in world markets and then returned to the ceiling in effect since 1941. Black-market meat operations were said to have reduced the quantity of hides and skins available to tanners during the latter part of the quarter.

Leather prices advanced approximately 20 percent in July, reflecting the rising cost of raw material. After controls were restored, prices of cattle-hide leathers declined to June ceiling levels, and tanners of kid leather and shearlings were granted price advances to compensate for the soaring prices of imported skins.

Factory prices of shoes moved up 12 percent in the third quarter, following adjustments in ceilings. Although August output of footwear continued at an unusually high level, sharply reduced shoe production was anticipated for the fourth quarter. Several prominent shoe firms curtailed production as a result of leather shortages, and manufacturers showed increasing interest in South American hides.

Prices paid by consumers for medium and lower grades of leather footwear continued to rise as a result of higher manufacturers' ceiling prices and the disappearance of lower price lines. Retailers and wholesalers complained of difficulty in obtaining shoes, many reporting an oversupply on nonessential footwear and an insufficiency of durable shoes, with no prospect of balanced stocks before the end of the year.

#### FUEL AND LIGHTING MATERIALS

Average primary market prices for fuel and lighting materials increased 7.4 percent during the third quarter of 1946, although realized prices for electricity and gas were lower. Decontrol of prices for petroleum and its products and specific OPA amendments granting higher ceilings to coal producers accounted for the increase in primary market prices. The revised act extending OPA restored

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to retailers their March 1946 margins, thus generally raising solid-fuels prices to consumers during the quarter.

Both commercial and domestic electricity rates continued their 1946 downward trend during the quarter, as earnings of utilities permitted billings at lowered rates. Gas rates remained unchanged in most cities. However, some utilities selling manufactured gas increased rates to cover higher fuel costs.

Late in the second quarter, the OPA, in order to cover wage and other cost increases and to "remove price as a transition period impediment to production and supply," had granted substantial price increases to coal producers, averaging 40 cents per ton for bituminous coal and 91 cents per ton for anthracite. Retailers were first granted an exact "pass-thru" in dollars and cents which reduced retailers' percentage margins. Late in August solid-fuels retailers were granted an additional increase of 10 to 30 cents per ton to restore March 31, 1946, percentage margins, which had been reduced in June when ceiling increases were sufficient only to pass on to the consumer the dollars-and-cents increases in wholesale prices.

With the suspension of price control at the end of June, producers of Connelsville beehive coke advanced their prices approximately \$1.25 per ton. Prices were rolled back to June 30, 1946, levels when price control was reestablished, but shortly thereafter an OPA amendment granted these producers a \$1.35 per ton ceiling advance to compensate for higher coal and labor costs.

Early in July the Interstate Commerce Commission allowed increases of 6 cents per net ton in coal freight rates of less than \$1.00 per ton and 8 cents in freight rates greater than \$1.00. Retailers were permitted to pass on this increase to consumers.

Fuel-oil prices as well as prices for all petroleum and its products were formally decontrolled in August. This was followed by price rises of 25 to 35 cents per barrel for crude petroleum. The Government then withdrew subsidy payments of 25 cents per barrel to certain stripper-well crude producers. Higher prices for crude petroleum were followed by corresponding increases in prices of petroleum products at all levels of sale, high lighted by fuel-oil price increases amounting to 0.6 to 1.75 cents per gallon at retail in several cities.

#### HOUSEFURNISHINGS

Prices of housefurnishings rose 6.1 percent at retail during the third quarter and 2.9 percent in primary markets. Advances at both levels followed largely increases in OPA ceilings. Prices during the OPA "holiday" were generally stable. Substitutions to higher priced merchandise, resulting from continued shortages, and re-introduction of some consumer durable goods into the consumers' price index in September, including radios, sewing and washing



machines, vacuum cleaners, and mechanical refrigerators, also contributed to the advances. Increases for these durable goods represent the total increase to September 1946 from December 1941, the last period when stocks were near normal. They account for a 1 percent increase in the retail costs of housefurnishings between August and September.

Prices of wool floor covering to the consumer advanced as retailers sold higher-cost inventories and the shift from lower to higher grades of covering continued. There was no change at the primary market level. Higher wholesale and consumer prices reflected the third industry-wide increase granted manufacturers of hard-surface floor covering on August 30, 1946—amounting to 2.8 percent—to cover increased freight rates and increased costs of materials and labor. Manpower shortages and shortages of certain materials, such as burlap, sizing, and linseed oil, continued to hamper production.

Changes in retail costs of wood household furniture during the quarter varied as retailers shopped around for sources of supply. Increases due to substitutions of higher price lines were numerous. OPA adjustments were followed by higher prices of bedsprings and sofa beds at wholesale and retail and of upholstered furniture and wood office furniture at the primary market level. One spokesman estimated current production of wood household furniture at 40 percent above the 1941 level. Supplies of hardware, upholstered springs and other metal items, and ticking and filling materials remained limited. Retailers reported all low- and medium-priced case goods in short supply, with dining-room suites almost unobtainable. Upholstered furniture appeared to be obtainable in greater quantity.

September 1946 retail prices of appliances reflected both OPA advances and the long-term increase from December 1941. In August, in order to assure March 31, 1946, mark-ups, retailers were permitted to pass on manufacturers' increases for radios, vacuum cleaners, washing machines, gas stoves, and dinnerware. Primary market prices reflected OPA-approved increases of 3.5 percent in the price of electric refrigerators, 8 percent on domestic cook stoves, 7 percent on semivitreous dinnerware, and the long-term increase caused by the reintroduction of electric washers and ironers into the wholesale price index.

Full-scale production in the electrical manufacturing industry was not expected until early 1947. Material shortages continued to be the major problem. For radios, vacuum cleaners, washing machines, and some small appliances, however, current production had passed the 1941 rate and some retailers reported clearance sales on lesser-known brands of small table model radios. Other major appliances, stoves, and dinnerware continued to be scarce.

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stores also were scarce. Towels were more plentiful, at considerably higher prices than in June. From June to September the cost to consumers of sheets and of towels advanced 12.2 percent.

#### HOUSING

Residential rents in all large cities combined increased 0.3 percent during the quarter, the largest increase reported in the rent index for any quarterly period since early in 1942 before Federal rent controls were instituted. Although rents advanced over the period, the largest increase occurred during suspension of Federal controls in July.

During this 25-day period, 21 of the 34 large cities surveyed by the Bureau reported increases in rents. The increases averaged 2.6 percent in Houston (affecting 12 percent of the tenants), slightly more than 1 percent in Cleveland and Scranton (affecting 5 percent of the tenants), 0.6 percent in Chicago, 0.5 percent in Denver, and from 0.1 to 0.4 percent in 16 other cities. Ten cities showed no change in rents and three cities reported slight decreases.

Washington, D. C., which has its own rent control law, was the only city not affected by suspension of controls. Rents in 7 of the other 33 cities surveyed were controlled by emergency State laws and in 5 cities by city ordinances. Some of the emergency legislation permitted increases up to 15 percent in rent.

The short duration of suspension of controls prevented many advances which might have occurred in a longer period since many State laws require a notice of rent increase or eviction, usually one rental payment period in advance of the effective date. Following the reinstitution of Federal rent control after July 25, rents for most dwellings returned to former OPA ceilings.

There was no relief during the quarter from the severe housing shortage. Continued shortages in some essential building materials delayed new construction, and some builders hesitated because of rising building costs.

In spite of the handicaps to the construction program, it was announced by Housing Expeditor Wilson Wyatt that 62,800 dwelling units were completed in August, making a total of 350,000 dwelling units completed since the first of this year.

Reports indicate that the rise in sales prices of homes and number of sales have slowed up somewhat during the past few months. Removal of homes from the rental market for owner occupancy is still very high.

#### MISCELLANEOUS

Retail costs of miscellaneous goods and services increased 1.6 percent on the average during the third quarter of 1946.

Scattered increases were noted in the cost of newspapers and motion picture admissions. Prices of beauty and barber shop services con-

tinued their upward trend, as shops reported increased costs of operations. Fees for medical services showed some advance, particularly hospital rates and charges for eyeglasses. Prices of lenses were increased at the manufacturers' level on August 23, 1946, with OPA approval. Several laundries were allowed increases in bundle charges, and there was an indication that the delivery service of both laundry and dry-cleaning establishments was improving. The cost of automobile repairs was higher following Government-approved increases in the price of parts. Tobacco products, exempt from control, increased in price at both the primary market and retail levels. Cigarettes increased one-half cent to 1 cent a pack at retail, and many brands of cigars rose from 7½ to 9 cents. During the lapse of OPA controls, some manufacturers of soaps raised prices because of limited production and increased costs of raw materials and labor. Recontrol on July 25 returned these items to June 30 ceilings where they remained despite substantial ceiling increases in prices of raw materials. Production of soap for the quarter was estimated at 50 percent of demand.

### *Industrial Goods*

#### BUILDING MATERIALS

Prices of building materials in primary markets continued upward during the third quarter, to a level approximately 50 percent above immediate prewar levels. The average advance during the quarter was 3 percent compared to about 4 percent during each of the two previous quarters.

The suspension of price controls had little noticeable effect on building material prices as a group. Higher prices for some materials in July reflected the general freight rate increase, effective July 1, of 6 percent with an additional 5 percent for eastern carriers. Moreover, a number of price adjustments covering building materials, pending on June 30, were granted; also, there were unusual price advances for some paint materials in July, because of shortages and soaring prices of imported materials such as shellac.

Production of most building materials remained inadequate to meet estimated housing needs, despite the substantial increases made during the last few months. Lack of skilled labor, freight car shortages, and strikes continued to hamper production. Particularly scarce were cast-iron soil pipe, millwork, gypsum board and lath, hardwood flooring, bath tubs, and lavatories. To increase production, premium payments were authorized for several commodities in short supply, principally softwood plywood, brick, oak flooring, and convactor radiators.

Prices of lumber advanced 1 percent—in sharp contrast to the 5 and 6 percent increases in the earlier quarters of 1946. The principal price rises permitted during the third quarter were for central hard-

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wood and redwood lumber, and western softwood shingles. Despite substantial increases in production, the supply of lumber still was far from satisfactory. It was reported in trade journals that lumber was widely sold in the black market at prices as much as 50 percent above ceilings. Western softwoods were on a 2 to 3 months delivery basis for priority orders. There was still a large backlog of orders for hardwood flooring, and residential flooring was reserved entirely for holders of housing priorities. Premium payment regulations, effective August 1, 1946, authorized manufacturers to pay reimbursable bonuses to their suppliers for specified grades and species of hardwood lumber, and entitled them to other payments based on output of residential flooring in excess of quotas. A premium payment plan was also instituted for production of peeler logs in an effort to lift production of softwood plywood.

Prices of paint and paint materials rose 7.5 percent, largely during the period of uncontrolled prices. By the end of July carbon black had risen 55 percent, and shellac 65 percent, while advances ranging from 12 to 35 percent were reported in prices of litharge, red lead, linseed oil, and turpentine. Prices declined in August with the reapplication of price ceilings but not to the level prevailing before suspension of controls. Several paint materials, including carbon black, rosin, and color pigments, were decontrolled in August and September, while ceiling prices were raised for lithopone, linseed oil, gum turpentine, paint, and shellac. Wholesale prices of the paint and paint materials group in September were more than 40 percent above prewar averages and were at the highest level since 1920. Many paint materials continued in short supply. Among these were lead, litharge, lithopone, zinc oxide, and drying oils.

Brick and tile prices rose 5.3 percent, raising the index for these commodities 40 percent above the August 1939 average, and almost 5 percent over the previous peak in August 1920. Fire clay and silica brick prices, which had been removed from OPA control in May, moved up about 8 percent and some local area adjustments were granted to producers of tile and common brick. Premium payments of \$5 per 1,000 standard brick equivalents in excess of quotas were inaugurated, and brick and tile production showed considerable improvement.

Prices of cement rose nearly 4 percent in the quarter, as ceilings were raised 5 cents per barrel for packaged cement produced east of the Rockies. The increased cost of pig iron resulted in higher prices for cast-iron enameled plumbing fixtures, and there were increases for cast-iron soil pipe, lead pipe, lime, builders' hardware, window glass, and wall board. The shortage of cast-iron soil pipe was critical. CPA estimated in August that the supply for 1946 would fall 30 percent short of demand. The Government instituted a number of

actions to relieve the situation, including a ceiling increase of 3 percent, an order to pig iron producers to channel greater supplies to soil pipe producers a set-aside of 80 percent of soil pipe for priority holders, a limit of 7 percent of production for industrial consumers, and premium payments effective August 1.

#### METALS AND MACHINERY

Prices of metals and metal products increased less than 2 percent from June to September 1946, with an advance of only 1 percent in July despite the absence of OPA controls. The increase in July reflected primarily higher prices for certain iron and steel products on which ceiling increases had been planned by OPA and price increases for nonferrous metals to offset the cessation of subsidy payments.

The Bureau's index of metals and metal products in September reached 114.2 percent of the 1926 level, the highest point since July 1921 and 9 percent above its level at the end of World War II.

During the temporary lapse of OPA controls and subsidies in July, trading in several nonferrous metals was virtually at a standstill. A break-through in former OPA ceilings occurred first in prices of lead and zinc, when leading sellers advanced their quotations  $1\frac{1}{4}$  cents a pound, maintaining that the new prices were below the sum of former prices and subsidies. Copper producers withdrew from the market rather than raise prices. Meanwhile RFC continued to sell copper from its stockpile at the old ceiling price, but lead and zinc at prices in effect at time of shipment, which were above former ceilings.

The restoration in late July of the old maximum prices for lead and zinc caused trading to decline sharply. Both metals were in critically short supply and both producers and consumers requested higher prices to stimulate output. The CPA stated that zinc shortage was accentuated by producers' action in marketing only output on which premiums were paid.

Prices of nonferrous metals continued to advance in the world market to levels above domestic ceilings, and RFC purchase prices of foreign lead and copper were 2 to 4 cents a pound higher than during the second quarter. Prices of zinc in the export market increased 2 cents a pound and tin 3 to 4 cents a pound.

Silver prices advanced to 90.125 cents a pound early in July compared to the former OPA ceiling of 71.11 cents. The ceiling price was restored temporarily on July 26 but advanced on August 1 to the new Treasury buying price of 90.5 cents a pound established by the Congress.

Prices of steel and its raw materials remained relatively stable during the quarter. Both steel mills and scrap dealers demanded higher ceilings or decontrol after the restoration of OPA. Output remained high during the quarter, despite shortages of steel scrap and

pig iron. Refusal of mills to pay more than former OPA ceilings for scrap kept prices of most grades down but sharp advances were reported in July for cast scrap used by foundries. Later, incentive increases, ranging from \$2.50 to \$7.00 per gross ton, were allowed for cast scrap. A Nation-wide scrap drive was inaugurated at the same time.

Prices of pig iron advanced early in July. Shortage of pig iron was one of the factors limiting production of castings, and CPA announced a plan for channeling supplies to castings for use in building materials and agricultural implements. An upward adjustment of \$2 a gross ton in maximum prices of pig iron was made in July, retroactive to May 29. A subsidy program announced on September 17 provided for payment of premiums ranging from \$8 per gross ton for production above base period quotas to \$12 per ton for new production.

In a further effort to aid the housing program, OPA on July 25 granted incentive price increases ranging from 10 to 50 percent over former ceiling prices to manufacturers of knobs, locks, butts, and other types of builders' hardware. Producers of metal fasteners were permitted an additional increase of 5 percent, late in July, to offset higher labor and material costs.

#### CHEMICALS AND ALLIED PRODUCTS

Prices for chemicals and allied products rose 3 percent in July and then declined about 1 percent with the reestablishment of OPA. Increases occurred primarily in chemicals derived from scarce farm or metal raw materials. Thus, prices for inedible tallow advanced 41.4 percent; glycerin, about 8.5 percent; vanillin, 73 percent; and cottonseed meal, 45.5 percent. Prices for lead arsenate, copper sulphate, and silver nitrate were higher. Although many chemical prices declined after the reestablishment of OPA controls, higher prices for others, under increased ceilings, resulted in a September average about 2 percent above the June level.

During this quarter, chemical manufacturers generally maintained stable prices but resale prices on occasional lots reflected the pressure of large demands upon tight supplies. This was particularly evident in alkalies, with July bids up to 11 cents a pound for caustic soda and 6 cents a pound for soda ash. Odd lots of sodium bichromate sold for 17 cents compared with the primary market price of 8 cents a pound and the resale prices for chemically pure glycerin ranged up to 40 cents a pound compared to 18 cents in primary markets.

Primary market prices for fats and oils showed the greatest fluctuation, advancing about 12 percent in July and then declining, so that September prices were only 1 percent above June. Sharpest increases were registered for tallows and greases, which rose about 50 percent above former ceilings because of demand from "soapers." Advances



for vegetable oils were smaller. Prices for soybean and castor oils were raised over June ceilings to compensate for increased costs.

In July, primary market prices for drugs and pharmaceuticals rose 2.9 percent, primarily because of increases for medicinal glycerin and menthol, but declined 2.2 percent in August, with a "roll back" in glycerin prices and increased supplies of nux vomica, tartaric acid, and ergot. The development of more productive mold strains now available in quantity caused penicillin prices to decrease to 48 cents per 100,000 units, an all-time low price to wholesalers.

Prices for fertilizer materials rose sharply in July and again in August, but declined in September. The increase for the quarter amounted to about 9 percent. Organic fertilizer materials rose rapidly in July because of competition with feed grades. Prices for cottonseed meal, ground bones, and animal tankage fell, following restoration of price controls. Maximum prices for mixed fertilizers were raised in August, accounting for an increase of about 4 percent during the quarter.

Average prices of industrial chemicals advanced 0.6 percent over the quarter. Prices for oleic and stearic acid and glycerin rose sharply in July, but declined in August. Higher metal prices resulted in increased ceilings for lead arsenate and silver nitrate and higher quotations for lead naphthenate. Decontrolled products, blasting powder (both grain and pellet), dynamite, and white arsenic rose by amounts varying from 9 to 18 percent.

#### RUBBER AND RUBBER PRODUCTS

During this quarter, prices of rubber and rubber products generally were stable, although a number of products were decontrolled. The price increases which occurred were principally those permitted by OPA to cover higher labor and material costs and to maintain earnings. Noteworthy among these was the approximately 2½-percent increase in retail ceiling prices on tires to restore distributors' percentage mark-ups. Products decontrolled during this period included a number of industrial rubber goods and rubber drug sundries.

Of particular importance was the September 6 directive of Reconstruction Director John R. Steelman to the Reconstruction Finance Corporation to maintain the sale price for natural rubber at 22½ cents a pound until the end of the year, compared with a purchase price of 23½ cents f.a.s. or 25-26 cents delivered. Subsequently, because natural rubber production increased more rapidly than anticipated, agreements were signed with the Governments of the Netherlands and the United Kingdom to purchase additional rubber at 20¼ cents per pound f.a.s.

The increase in natural rubber production and shipments led to general expectation of the return of free rubber trading by the beginning of next year. Supplies of synthetic rubber, however, are inade-

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quate because of the alcohol shortage. Limitations on the delivery and inventories of GR-S were reinstituted in order to insure equitable distribution of the present limited supply.

Although the supply of scrap was adequate, scrap rubber dealers reported an increased reluctance on the part of reclaimers to accept scrap containing synthetic. Rejections of mixed scrap, higher freight rates, and the unsalability of synthetic tire parts caused Akron dealers to raise prices on some grades of acceptable scrap in August.

#### PAPER AND PULP

Paper and pulp prices advanced about 5 percent during the third quarter as increases in manufacturers' ceilings were granted in order to maintain supplies and to compensate for higher labor and material costs. Higher prices for wood pulp and newsprint also were allowed because of the revaluation of the Canadian dollar and Swedish krona.

During the suspension of OPA controls, mills, converters, and distributors maintained June quotations for most paper and paper products, except wood pulp. Some producers of wood pulp billed on "an adjustable pricing basis," others raised their quotations to match the 10-percent higher prices asked by Canadian exporters and the substantially higher prices demanded by Swedish exporters. Ceiling prices for wood pulp, both domestically produced and imported, were increased approximately 10 percent, and subsidies to domestic producers were restored following the reestablishment of OPA. To encourage Scandinavian imports, the amount of transportation costs required to be absorbed by sellers was cut in half. For newsprint, new ceilings were established \$7 a ton higher.

Following reestablishment of OPA, manufacturers' ceiling prices for the lower-priced book and writing papers, Northern bleached sulphate waxing papers, glassine and grease-proof papers, facial tissue, toilet tissue, paper toweling and towels, and ground wood specialty papers were increased. Wholesale and retail ceiling prices also were raised to restore percentage mark-ups. During late July and August, paperboard ceilings were increased to encourage production of the essential grades used in all types of containers.

Demand for paper products continued to be heavy with reports indicating the inability of many consumers to obtain supplies for current consumption, although record-breaking production was achieved in August. Localized operating problems, such as lack of freight cars, continuing shortages of mechanized equipment, and wet weather, affected pulpwood procurement on the West Coast and in the South. Imports of wood pulp were not up to expectation. Waste paper receipts, on the other hand, were larger.

## Index of Consumers' Prices in Large Cities, October 1946<sup>1</sup>

RETAIL prices of living essentials used by moderate-income city families advanced 1.7 percent between mid-September and mid-October 1946. Food prices rose 3.4 percent, and prices of consumers' goods and services other than food and rent rose 0.6 percent. Rents were not surveyed in October. The consumers' price index on October 15, 1946, was 148.4 percent of the 1935-39 average and 15.1 percent higher than a year ago.

In mid-October prices of goods and services used by moderate-income city families were 50.5 percent higher than in mid-August 1939. The family food bill increased 92.5 percent; clothing and housefurnishings costs each advanced more than 66 percent; but residential rents increased only 4.3 percent.

Retail food prices in large cities advanced 3.4 percent between mid-September and mid-October 1946. Butter prices rose almost 13 cents per pound during the month; in mid-October butter was 96 cents per pound as compared with 35 cents in October 1939 and 61 cents in June 1946. Poultry and egg prices—each in demand as meat substitutes in September and early October—increased 17 and 11 percent, respectively. The cost of sugar to consumers jumped 20 percent as retailers were allowed to raise their prices to cover increases in prices given to sugar producers.

<sup>1</sup> The "consumers' price index for moderate-income families in large cities," formerly known as the "cost of living index," measures average changes in retail prices of selected goods, rents and services, weighted by quantities bought by families of wage earners and moderate-income workers in large cities in 1934-36. The items priced for the index constituted about 70 percent of the expenditures of city families whose incomes averaged \$1,524 in 1934-36.

The index only partially shows the wartime effects of changes in quality, availability of consumer goods, etc. The President's Committee on the Cost of Living has estimated that such factors, together with certain others not fully measured by the index, would add a maximum of 3 to 4 points to the index for large cities between January 1941 and September 1944. If account is taken of continued deterioration of quality and disappearance of low-priced merchandise between September 1944 and September 1945, which was estimated at an additional  $\frac{1}{4}$  point, the total large-city adjustment would be  $4\frac{1}{4}$  points. If small cities were included in the national average, another  $\frac{1}{4}$  point would be added, making the total approximately 5 points.

The indexes in the accompanying tables are based on time-to-time changes in the cost of goods and services purchased by wage earners and lower-salaried workers in large cities. They do not indicate whether it costs more to live in one city than in another. The data relate to the 15th of each month, except those for January 1941, in tables 1 and 2. They were estimated for January 1, 1941, the base date for determining allowable "cost of living" wage increases under the Little Steel formula and under the wage-price policy of February 1946. January 1, 1941, indexes in tables 1 and 2 have been estimated by assuming an even rate of change from December 15, 1940, to the next pricing date.

Food prices are collected monthly in 56 cities during the first 4 days of the week which includes the Tuesday nearest the 15th of the month. Aggregate costs of foods in each city, weighted to represent food purchases of families of wage earners and lower-salaried workers, have been combined for the United States with the use of population weights. In March 1943, the number of cities included in the food index was increased from 51 to 56, and the number of foods from 54 to 61. Prices of clothing, housefurnishings, and miscellaneous goods and services are obtained in 34 large cities in March, June, September, and December. In intervening months, prices are collected in 21 of the 34 cities for a shorter list of goods and services. Rents are surveyed semiannually in most of the 34 cities (in March and September, or in June and December). In computing the all-items indexes for individual cities and the rent index for the average of large cities, because of the general stability of average rents at present, the indexes are held constant in cities not surveyed during the current quarter. Prices for fuel, electricity, and ice are collected monthly in 34 large cities.

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Fresh fruit and vegetable prices showed a further decline of 1.3 percent, with prices of spinach, lettuce, cabbage, and potatoes 4 to 9 percent lower. It is estimated that meat prices increased 1.2 percent over the month. (See note, p. 999.) Food prices in mid-October were 29.2 percent higher than a year ago and 23.6 percent above mid-June. They were obtained in the period October 14-17; meat price controls were removed effective October 15.

Average costs of clothing again advanced. The sharp increases in prices of raw cotton during the summer were reflected in October in the higher prices for many essential cotton garments. Prices for all types of leather footwear advanced as a result of higher ceiling prices granted to manufacturers in recent months to offset the rising cost of leather. Prices for sweaters were somewhat lower in many stores as supplies increased.

Housefurnishings prices rose 1.2 percent during the month as higher price lines replaced those previously available and retailers adjusted their prices in accordance with price increases granted by OPA before all price controls were removed. Prices of sheets, mattresses, cook stoves, sewing machines, radios, electric refrigerators, vacuum cleaners, and washing machines advanced in many of the 21 cities surveyed. Average costs for bedroom furniture were also higher, although somewhat lower prices were reported in a few cities.

Miscellaneous goods and services rose 0.7 percent because of higher prices for cigarettes, beauty-shop services, motion-picture admissions, and motor oil. Electricity costs declined 7 percent in New Orleans as lower rates became effective on October 1.

TABLE 1.—*Index of Consumers' Prices for Moderate-Income Families and Percent of Change, October 1946, Compared With Earlier Months*

Group	October 1946	September 1946	October 1945	August 1945	January 1941	August 1939
	This month	Last month	Year ago	VJ-day	Wage base date	Month be- fore war in Europe
Indexes (1935-39=100)						
All items.....	148.4	145.9	128.9	129.3	100.8	98.6
Food.....	180.0	174.1	139.3	140.9	97.6	93.5
Clothing.....	167.0	165.9	148.5	146.4	101.2	100.3
Rent.....		108.8			105.0	104.3
Fuel, electricity, and ice.....	114.4	114.4	110.5	111.4	100.8	97.5
Gas and electricity.....	91.6	91.7	94.8	95.2	97.5	99.0
Other fuels and ice.....	136.5	136.5	125.7	127.2	104.0	96.3
Housefurnishings.....	167.6	165.6	146.9	146.0	100.2	100.6
Miscellaneous.....	130.8	129.9	124.7	124.5	101.8	100.4
Percent of change to October 1946						
All items.....		+1.7	+15.1	+14.8	+47.2	+50.5
Food.....		+3.4	+29.2	+27.8	+84.4	+92.5
Clothing.....		+7	+12.5	+14.1	+65.0	+66.5
Rent <sup>1</sup> .....					+3.6	+4.3
Fuel, electricity, and ice.....		0	+3.5	+2.7	+13.5	+17.3
Gas and electricity.....		-1	-3.4	-3.8	-6.1	-7.5
Other fuels and ice.....		0	+8.6	+7.3	+31.2	+41.7
Housefurnishings.....		+1.2	+14.1	+14.8	+67.3	+66.6
Miscellaneous.....		+7	+4.9	+5.1	+28.5	+30.3

<sup>1</sup> Percent of change to September 1946.

TABLE 2.—Percent of Increase in Consumers' Price Index From Specific Dates to October 1946, by Cities

City	September 1946	October 1945	August 1945	January 1941	August 1939
	Last month	Year ago	VJ-day	Wage base date	Month before war in Europe
Average.....	1.7	15.1	14.8	47.2	50.5
Baltimore, Md.....	1.7	14.0	13.6	49.6	52.6
Birmingham, Ala.....	2.2	12.9	12.2	47.9	52.6
Boston, Mass.....	2.0	16.1	15.0	45.8	48.8
Buffalo, N. Y.....	1.0	13.8	13.1	43.6	48.5
Chicago, Ill.....	2.1	16.9	16.7	47.4	51.2
Cincinnati, Ohio.....	.6	13.1	13.1	46.9	50.4
Cleveland, Ohio.....	1.1	13.3	12.9	46.3	49.2
Denver, Colo.....	.6	13.0	12.2	43.3	45.3
Detroit, Mich.....	1.4	13.8	13.3	47.2	51.0
Houston, Tex.....	.8	13.1	13.0	41.1	42.9
Kansas City, Mo.....	.6	11.8	11.3	44.3	44.0
Los Angeles, Calif.....	1.9	12.0	13.1	44.6	47.5
Minneapolis, Minn.....	2.3	16.4	16.7	43.1	46.1
New York, N. Y.....	2.1	17.9	17.4	51.1	54.1
Philadelphia, Pa.....	1.4	15.9	15.3	49.3	51.4
Pittsburgh, Pa.....	1.1	14.6	14.4	47.2	51.4
St. Louis, Mo.....	2.5	15.4	14.9	45.0	49.3
San Francisco, Calif.....	1.4	15.0	15.5	50.3	54.1
Savannah, Ga.....	.8	12.8	12.1	53.0	56.2
Seattle, Wash.....	2.6	15.1	14.2	48.7	51.3
Washington, D. C.....	1.6	14.2	14.3	47.4	49.4

TABLE 3.—Percent of Change in Consumers' Price Index, September to October 1946, by Cities and Groups of Items

City	All items	Food	Clothing	Fuel, electricity, and ice			House-furnishings	Miscellaneous
				Total	Gas and electricity	Other fuels and ice		
Average.....	+1.7	+3.4	+0.7	0	-0.1	0	+1.2	+0.7
Atlanta, Ga.....		+2.4		+2	0	+3		
Baltimore, Md.....	+1.7	+3.3	+8	+3	0	+4	+3	+6
Birmingham, Ala.....	+2.2	+3.6	+6	+2	0	+2	+3.7	+1.9
Boston, Mass.....	+2.0	+3.8	+1.5	-2	-1.0	+1	+3.8	+2
Buffalo, N. Y.....	+1.0	+2.2	+5	-3	0	-6	+4	+4
Chicago, Ill.....	+2.1	+4.1	+3	+2	0	+3	+1.8	+7
Cincinnati, Ohio.....	+6	+1.2	+1	0	0	0	-1	+4
Cleveland, Ohio.....	+1.1	+2.1	+1.6	0	0	0	+1.0	-2
Denver, Colo.....	+6	+8	+1.4	+1	0	+1	+5	+2
Detroit, Mich.....	+1.4	+3.3	+7	0	0	0	+2	+4
Houston, Tex.....	+8	+7	+6	0	0	0	+1.7	+1.0
Indianapolis, Ind.....		+2.0		0	0	0		
Jacksonville, Fla.....		+1.0		0	0	0		
Kansas City, Mo.....	+6	+8	+4	0	0	0	+1.1	+8
Los Angeles, Calif.....	+1.9	+3.6	+9	0	0	0	+2.5	+8
Manchester, N. H.....		+4.1		+1	+2	0		
Memphis, Tenn.....		+3.1		+1	0	0		
Milwaukee, Wis.....		+2.6		+1	+1	0		
Minneapolis, Minn.....	+2.3	+5.8	+5	0	0	0	+4	0
Mobile, Ala.....		+3.6		+1	0	+2		
New Orleans, La.....		+2.8		-1.3	-2.6	0		
New York, N. Y.....	+2.1	+4.4	+1	-1	0	-2	+1	+1.0
Norfolk, Va.....		+6.7		+2	0	+3		
Philadelphia, Pa.....	+1.4	+2.9	+2	0	0	+1	+1	+8
Pittsburgh, Pa.....	+1.1	+1.4	+2.8	0	0	0	+1.7	+4
Portland, Maine.....		+3.9		+2	+6	0		
Portland, Oreg.....		-4		-4	+1	-6		
Richmond, Va.....		+5.1		0	0	+1		
St. Louis, Mo.....	+2.5	+5.2	+6	0	0	0	+8	+6
San Francisco, Calif.....	+1.4	+2.6	+4	0	0	0	+3	+8
Savannah, Ga.....	+8	+9	+1.4	-8	0	-1.0	+2.3	+1.0
Scranton, Pa.....		+4.9		0	0	0		
Seattle, Wash.....	+2.6	+6.0	+1	0	0	+1	+1	+4
Washington, D. C.....	+1.6	+3.4	+7	0	0	0	+3.0	+5

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TABLE 4.—*Indexes of Consumers' Prices for Moderate-Income Families in Large Cities, 1935 to October 1946*

Year and month	Indexes (1935-39=100) of cost of—						
	All items	Food	Clothing	Rent	Fuel, electricity, and ice	House-furnishings	Miscellaneous
1935.....	98.1	100.4	96.8	94.2	100.7	94.8	98.1
1936.....	99.1	101.3	97.6	96.4	100.2	96.3	98.7
1937.....	102.7	105.3	102.8	100.9	100.2	104.3	101.0
1938.....	100.8	97.8	102.2	104.1	99.9	103.3	101.5
1939.....	99.4	95.2	100.5	104.3	99.0	101.3	100.7
1940.....	100.2	96.6	101.7	104.6	99.7	100.5	101.1
1941.....	105.2	105.5	106.3	106.2	102.2	107.3	104.0
1942.....	116.5	123.9	124.2	108.5	105.4	122.2	110.9
1943.....	123.6	138.0	129.7	108.0	107.7	125.6	115.8
1944.....	125.5	136.1	138.8	108.2	109.8	136.4	121.3
1945.....	128.4	139.1	145.9	108.3	110.3	145.8	124.1
1945: Jan. 15.....	127.1	137.3	143.0	( <sup>1</sup> )	109.7	143.6	123.3
Feb. 15.....	126.9	136.5	143.3	( <sup>1</sup> )	110.0	144.0	123.4
Mar. 15.....	126.8	135.9	143.7	108.3	110.0	144.5	123.6
Apr. 15.....	127.1	136.6	144.1	( <sup>1</sup> )	109.8	144.9	123.8
May 15.....	128.1	138.8	144.6	( <sup>1</sup> )	110.0	145.4	123.9
June 15.....	129.0	141.1	145.4	108.3	110.0	145.8	124.0
July 15.....	129.4	141.7	145.9	( <sup>1</sup> )	111.2	145.6	124.3
Aug. 15.....	129.3	140.9	146.4	( <sup>1</sup> )	111.4	146.0	124.5
Sept. 15.....	128.9	139.4	148.2	108.3	110.7	146.8	124.6
Oct. 15.....	128.9	139.3	148.5	( <sup>1</sup> )	110.5	146.9	124.7
Nov. 15.....	129.3	140.1	148.7	( <sup>1</sup> )	110.1	147.6	124.6
Dec. 15.....	129.9	141.4	149.4	108.3	110.3	148.3	124.8
1946: Jan. 15.....	129.9	141.0	149.7	( <sup>1</sup> )	110.8	148.8	125.4
Feb. 15.....	129.6	139.6	150.5	( <sup>1</sup> )	111.0	149.7	125.6
Mar. 15.....	130.2	140.1	153.1	108.4	110.5	150.2	125.9
Apr. 15.....	131.1	141.7	154.5	( <sup>1</sup> )	110.4	152.0	126.7
May 15.....	131.7	142.6	155.7	( <sup>1</sup> )	110.3	153.7	127.2
June 15.....	133.3	145.6	157.2	108.5	110.5	156.1	127.9
July 15.....	141.2	165.7	158.7	( <sup>1</sup> )	113.3	157.9	128.2
Aug. 15.....	144.1	171.2	161.2	108.7	113.7	160.0	129.8
Sept. 15.....	145.9	174.1	165.9	108.8	114.4	165.6	129.9
Oct. 15.....	148.4	180.0	167.0	( <sup>1</sup> )	114.4	167.6	130.8

<sup>1</sup> Rents not surveyed in this month.

NOTE.—Sufficient price quotations were obtained in mid-October to compute price indexes for beef and veal in many cities but the shortage of pork in all cities, and the scarcity of beef, veal, and lamb in a few cities continued to be so severe that a reliable sample of prices could not be obtained. For those meats in the cities where an adequate number of prices could be obtained, mid-October prices were compared directly with prices in August, the last month in which sufficient quotations were secured for most meats used in computing the index. For meats for which an adequate sample of prices was not obtained in mid-October, prices were again held unchanged at August levels in computing the index. An adequate number of quotations was reported in all cities for poultry and fish. On this basis the average increase in the cost of meat, fish, and poultry combined to consumers between September and October has been estimated at 1.2 percent.

It is expected that the November meat index will be based on the usual number of price quotations and will describe in full the change that has occurred in the price of meat between mid-November and mid-August, the last date for which quotations could be obtained from nearly all stores.



## Retail Prices of Food in October 1946

RETAIL prices of food in October 1946 in relation to those in selected preceding periods are shown in the accompanying tables.

TABLE 1.—Percent of Change in Retail Prices of Food in 56 Large Cities Combined, by Commodity Groups, in Specified Periods

Commodity group	Sept. 17, 1946, to Oct. 15, 1946	Oct. 16, 1945, to Oct. 15, 1946	May 18, 1943, to Oct. 15, 1946	Jan. 14, 1941, to Oct. 15, 1946	Aug. 15, 1939, to Oct. 15, 1946
All foods.....	+3.4	+29.2	+25.9	+84.0	+92.5
Cereals and bakery products.....	+9	+26.9	+28.7	+45.9	+48.3
Meats.....	<sup>1</sup> +1.2	+45.6	+37.9	+88.6	+99.3
Beef and veal.....	<sup>1</sup> -3.2	+47.7	+33.1	+59.6	+75.3
Pork.....	( <sup>1</sup> )	+62.0	+45.3	+111.8	+107.3
Lamb.....	<sup>1</sup> +1	+37.8	+32.6	+90.2	+90.0
Chickens.....	+16.9	+47.9	+52.6	+131.8	+138.2
Fish, fresh and canned.....	+5.0	+12.8	+24.5	+110.4	+150.7
Dairy products.....	+8.5	+51.8	+47.8	+92.6	+117.4
Eggs.....	+11.0	+15.7	+51.0	+120.3	+136.6
Fruits and vegetables.....	+1	+2.3	-7.5	+89.2	+91.0
Fresh.....	-1.3	-1.9	-13.1	+91.4	+92.7
Canned.....	+4.0	+18.6	+17.9	+69.1	+68.8
Dried.....	+7.1	+17.6	+25.8	+99.5	+120.0
Beverages.....	+2.8	+33.5	+33.7	+83.2	+75.4
Fats and oils.....	-2.3	+19.3	+17.1	+84.2	+75.0
Sugar and sweets.....	+18.4	+32.4	+31.3	+75.8	+75.2

<sup>1</sup> Prices were held at August levels as follows: Pork—all cities, round steak—28 cities, rib roast—33 cities, chuck roast—32 cities, beef liver—38 cities, hamburger—30 cities, veal cutlets—41 cities, leg of lamb—35 cities, lamb chops—33 cities. It is expected that the November meat index will be based on the usual number of price quotations and will describe in full the change that has occurred in the price of meat between mid-November and mid-August, the last date for which quotations could be obtained from nearly all stores.

TABLE 2.—Indexes of Retail Prices of Food in 56 Large Cities Combined,<sup>1</sup> by Commodity Groups, on Specified Dates

[1935-39=100]

Commodity group	1946		1945	1943	1941	1939
	Oct. 15 <sup>2</sup>	Sept. 17	Oct. 16	May 18	Jan. 14	Aug. 15
All foods.....	180.0	174.1	139.3	143.0	97.8	93.5
Cereals and bakery products.....	138.5	137.3	109.1	107.6	94.9	93.4
Meats.....	<sup>3</sup> 190.7	188.5	131.0	138.3	101.1	95.7
Beef and veal.....	<sup>3</sup> 174.6	180.3	118.2	131.2	109.4	99.6
Pork.....	<sup>3</sup> 182.4	182.4	112.6	125.5	86.1	88.0
Lamb.....	<sup>3</sup> 187.7	<sup>4</sup> 187.6	136.2	141.6	98.7	98.8
Chickens.....	225.3	192.8	152.3	147.6	97.2	94.6
Fish, fresh and canned.....	249.7	237.8	221.3	200.5	118.7	99.6
Dairy products.....	202.4	186.6	133.3	136.9	105.1	93.1
Eggs.....	214.6	193.3	185.5	142.1	97.4	90.7
Fruits and vegetables.....	176.5	176.4	172.5	190.8	93.3	92.4
Fresh.....	178.8	181.1	182.3	205.8	93.4	92.8
Canned.....	154.6	148.7	130.4	131.1	91.4	91.6
Dried.....	198.7	185.6	168.9	158.0	99.6	90.3
Beverages.....	166.5	162.0	124.7	124.5	90.9	94.9
Fats and oils.....	147.9	151.4	124.0	126.3	80.3	84.5
Sugar and sweets.....	167.5	141.5	126.5	127.6	95.3	95.6

<sup>1</sup> Aggregate costs of 61 foods in each city, weighted to represent total purchases by families of wage earners and lower-salaried workers, have been combined with the use of population weights.

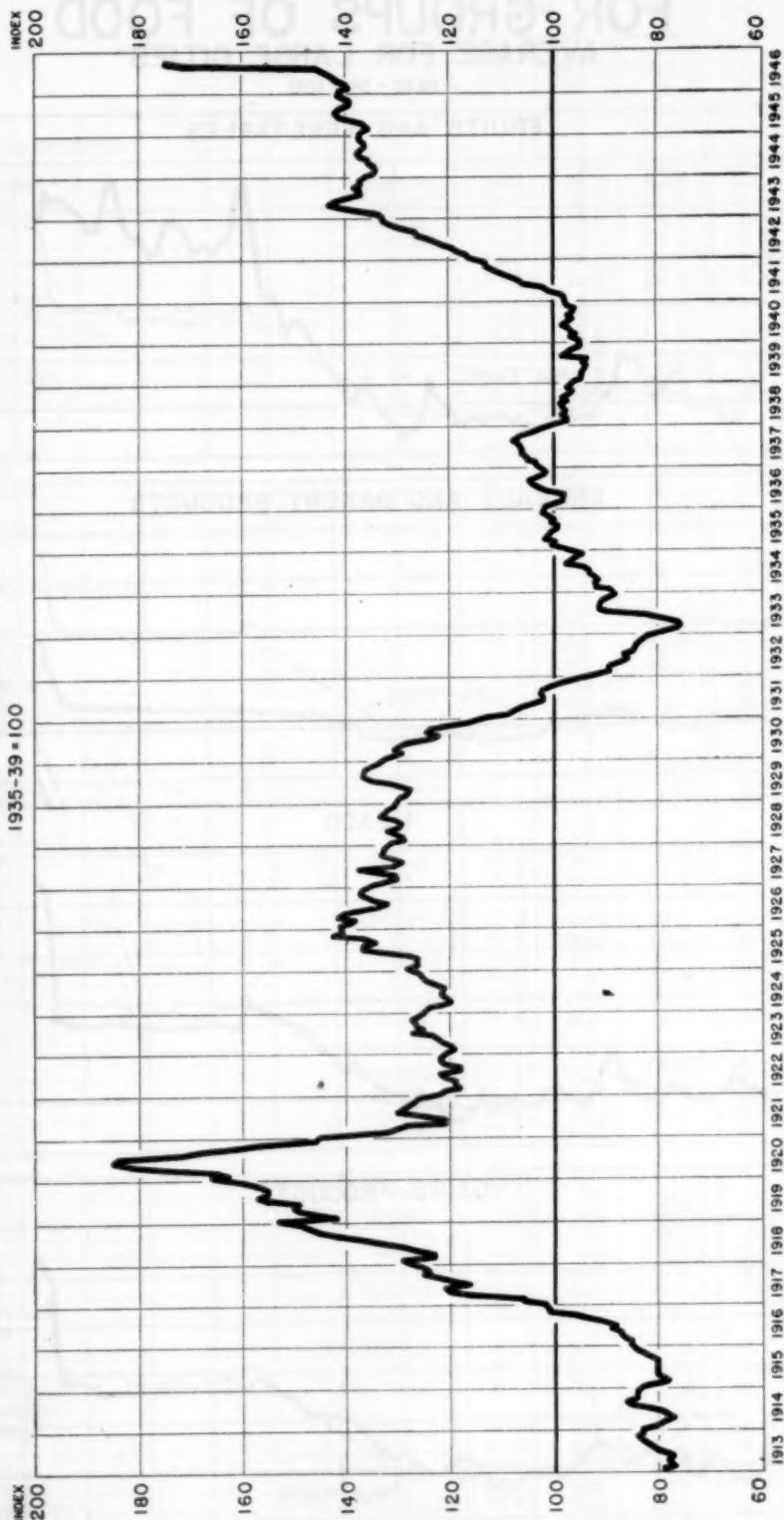
<sup>2</sup> Preliminary.

<sup>3</sup> Prices were held at August levels as follows: pork—all cities, round steak—28 cities, rib roast—33 cities, chuck roast—32 cities, beef liver—38 cities, hamburger—30 cities, veal cutlets—41 cities, leg of lamb—35 cities, lamb chops—33 cities. It is expected that the November meat index will be based on the usual number of price quotations and will describe in full the change that has occurred in the price of meat between mid-November and mid-August, the last date for which quotations could be obtained from nearly all stores.

<sup>4</sup> Revised.

# RETAIL PRICES OF FOOD TO CITY WORKERS AVERAGE FOR LARGE CITIES

1935-39 = 100



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

# RETAIL PRICES FOR GROUPS OF FOOD AVERAGE FOR LARGE CITIES

1935-39 = 100

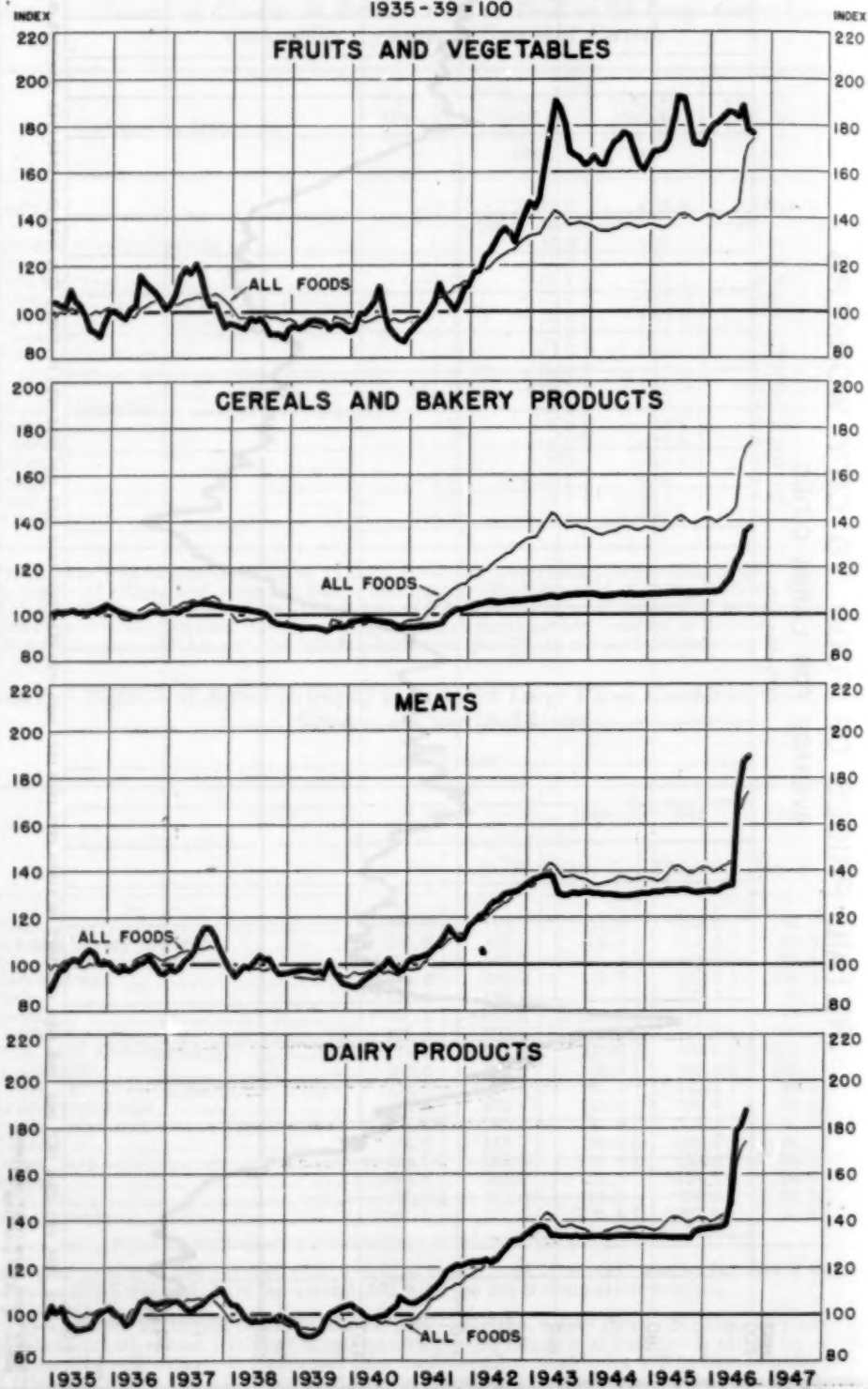

 UNITED STATES DEPARTMENT OF LABOR  
 BUREAU OF LABOR STATISTICS

TABLE 3.—

Cereals and	
Cereals:	
Flour	
Macaroni	
Corn	
Corn	
Rice	
Rolls	
Bakery products	
Bread	
Bread	
Bread	
Vanilla	
Soda	
Meats:	
Beef:	
Round	
Rib	
Chuck	
Live	
Ham	
Veal:	
Cut	
Roast	
Pork:	
Chop	
Bacon	
Ham	
Ham	
Salt	
Sausage	
Lamb:	
Leg	
Rib	
Poultry: Roast	
Fish:	
Fish (fresh)	
Salmon	
Salmon	
Dairy products	
Butter	
Cheese	
Milk, fluid	
Milk, fluid	
Milk, condensed	
Eggs: Eggs	
Fruits and	
Fresh fruit	
Apples	
Bananas	
Oranges	
Grapes	
Fresh vegetables	
Beans	
Cauliflower	
Corn	
Leeks	
Onions	
Potatoes	
Spinach	
Swiss chard	
Canned	
Peas	
Pilchard	
Grapes	
Canned	
Beans	
Cauliflower	
Corn	
Potatoes	
Spinach	
Swiss chard	
Dried	
Dried	
Nuts	

See foot



TABLE 3.—Average Retail Prices of 78\* Foods in 56 Large Cities Combined, October 1946,  
Compared with Earlier Months

Article	1946		1945	1941	1939
	Oct. 15 <sup>1</sup>	Sept. 17	Oct. 16	Jan. 14	Aug. 15
<b>Cereals and bakery products:</b>					
Cereals:	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Flour, wheat <sup>2</sup> .....5 pounds.....	40.3	38.6	32.1	20.7	17.9
Macaroni.....pound.....	18.6	18.0	15.7	13.8	14.0
Corn flakes <sup>4</sup> .....11 ounces.....	11.7	11.6	9.2	9.8	9.7
Corn meal.....pound.....	8.6	8.4	6.5	4.2	4.0
Rice <sup>3</sup> .....do.....	14.8	14.1	12.7	7.9	7.5
Rollled oats.....do.....	10.6	10.6	10.4	7.1	7.1
Bakery products:					
Bread, white.....do.....	11.6	11.6	8.8	7.8	7.8
Bread, whole wheat.....do.....	12.5	12.6	9.6	8.7	8.8
Bread, rye.....do.....	13.4	13.2	9.9	9.0	9.2
Vanilla cookies.....do.....	33.7	34.0	29.1	25.1	( <sup>5</sup> )
Soda crackers.....do.....	22.2	21.6	18.9	15.0	14.8
<b>Meats:</b>					
Beef:					
Round steak.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	40.9	38.6	36.4
Rib roast.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	33.1	31.5	28.9
Chuck roast.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	28.4	25.2	22.5
Liver.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	37.2	( <sup>6</sup> )	( <sup>6</sup> )
Hamburger.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	27.3	( <sup>6</sup> )	( <sup>6</sup> )
Veal:					
Cutlets.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	44.5	45.2	42.5
Roast, boned and rolled <sup>3</sup> .....do.....	( <sup>6</sup> )	( <sup>6</sup> )	35.1	( <sup>6</sup> )	( <sup>6</sup> )
Pork:					
Chops.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	37.2	29.1	30.9
Bacon, sliced.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	41.2	30.1	30.4
Ham, sliced.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	49.4	45.1	46.4
Ham, whole.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	34.7	26.2	27.4
Salt pork.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	22.0	16.7	15.4
Sausage <sup>3</sup> .....do.....	( <sup>6</sup> )	( <sup>6</sup> )	38.7	( <sup>6</sup> )	( <sup>6</sup> )
Lamb:					
Leg.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	40.4	27.8	27.6
Rib chops.....do.....	( <sup>6</sup> )	( <sup>6</sup> )	45.9	35.0	36.7
Poultry: Roasting chickens.....do.....	68.0	58.2	46.1	31.1	30.9
<b>Fish:</b>					
Fish (fresh, frozen).....do.....	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )
Salmon, pink.....16-ounce can.....	24.1	24.0	23.0	15.7	12.8
Salmon, red <sup>3</sup> .....do.....	43.2	41.7	40.2	26.4	23.1
<b>Dairy products:</b>					
Butter.....pound.....	96.3	82.9	49.9	38.0	30.7
Cheese.....do.....	65.3	60.3	35.7	27.0	24.7
Milk, fresh (delivered).....quart.....	20.0	19.3	15.6	13.0	12.0
Milk, fresh (store).....do.....	19.0	18.2	14.5	11.9	11.0
Milk, evaporated.....14½-ounce can.....	13.2	12.7	10.0	7.1	6.7
Eggs: Eggs, fresh.....dozen.....	74.4	67.0	65.7	34.9	32.0
<b>Fruits and vegetables:</b>					
Fresh fruits:					
Apples.....pound.....	11.4	11.2	13.6	5.2	4.4
Bananas.....do.....	11.0	11.0	10.4	6.6	6.1
Oranges.....dozen.....	57.4	57.4	51.2	27.3	31.5
Grapefruit <sup>3</sup> .....each.....	10.0	11.7	10.0	( <sup>6</sup> )	( <sup>6</sup> )
Fresh vegetables:					
Beans, green.....pound.....	18.1	17.4	17.0	14.0	7.2
Cabbage.....do.....	5.1	5.4	4.8	3.4	3.9
Carrots.....bunch.....	9.5	8.9	9.0	6.0	4.6
Lettuce.....head.....	11.5	12.2	12.2	8.4	8.4
Onions.....pound.....	4.7	4.7	6.6	3.6	3.6
Potatoes.....15 pounds.....	61.0	63.7	62.0	29.2	34.4
Spinach.....pound.....	10.8	11.9	11.1	7.3	7.8
Sweetpotatoes.....do.....	9.1	9.5	7.7	5.0	5.5
Canned fruits:					
Peaches.....No. 2½ can.....	30.8	30.1	27.5	16.5	17.1
Pineapple.....do.....	28.9	28.5	26.3	20.9	21.0
Grapefruit juice.....No. 2 can.....	15.2	15.3	14.5	( <sup>6</sup> )	( <sup>6</sup> )
Canned vegetables:					
Beans, green.....do.....	15.0	14.6	13.1	10.0	10.0
Corn.....do.....	16.2	15.4	14.8	10.7	10.4
Peas.....do.....	15.2	14.8	13.3	13.2	13.6
Tomatoes.....do.....	17.6	16.7	12.2	8.4	8.6
Soup, vegetable <sup>3</sup> .....11-ounce can.....	13.7	13.4	13.0	( <sup>6</sup> )	( <sup>6</sup> )
Dried fruits: Prunes.....pound.....	20.0	18.4	17.3	9.6	8.8
Dried vegetables:					
Navy beans.....do.....	14.6	13.9	11.5	6.5	5.8

See footnotes at end of table.

TABLE 3.—Average Retail Prices of 78 Foods in 56 Large Cities Combined, October 1946, Compared With Earlier Months—Continued

Article	1946		1945	1941	1939
	Oct. 15	Sept. 17	Oct. 16	Jan. 14	Aug. 15
Beverages:					
Coffee.....pound.....	Cents 41.6	Cents 40.4	Cents 30.6	Cents 20.7	Cents 22.3
Tea..... $\frac{1}{4}$ -pound.....	24.3	24.3	24.3	17.6	17.2
Cocoa <sup>1</sup> ..... $\frac{1}{2}$ -pound.....	10.9	10.5	10.4	9.1	8.6
Fats and oils:					
Lard.....pound.....	25.8	23.2	18.8	9.3	9.9
Shortening other than lard:					
In cartons.....do.....	22.3	22.9	20.0	11.3	11.7
In other containers.....do.....	27.0	26.3	24.5	18.3	20.2
Salad dressing.....pint.....	30.2	29.7	24.5	20.1	( <sup>2</sup> )
Oleomargarine.....pound.....	27.2	26.5	24.3	15.6	16.5
Peanut butter.....do.....	34.9	34.6	28.6	17.9	17.9
Oil, cooking or salad <sup>3</sup> .....pint.....	32.1	32.1	30.0	( <sup>4</sup> )	( <sup>5</sup> )
Sugar and sweets:					
Sugar.....pound.....	9.0	7.5	6.6	5.1	5.2
Corn sirup.....24-ounce.....	19.2	18.6	15.8	13.6	13.7
Molasses <sup>6</sup> <sup>7</sup> .....16-fluid-ounce.....	20.8	20.6	20.4	17.3	17.6

\*The collection of prices for the following eight foods not included in the index was discontinued as of October 1946: Wheat cereal, pancake flour, stew meat, liver, bologna, beets, dehydrated chicken noodle soup, and apple butter.

<sup>1</sup> Preliminary.

<sup>2</sup> Price formerly published for 10 pounds.

<sup>3</sup> Not included in index.

<sup>4</sup> Price formerly published for 8 ounces.

<sup>5</sup> Not priced.

<sup>6</sup> Composite price not computed.

<sup>7</sup> Price formerly published for 18 ounces avoirdupois.

\* Average for 56 cities combined not computed because of high percentage of cities with prices held at August levels.

TABLE 4.—Indexes of Average Retail Prices of All Foods, by Cities,<sup>1</sup> on Specified Dates [1935-39=100]

City	1946		1945	1941	1939
	Oct. 15 <sup>2</sup> <sup>4</sup>	Sept. 17	Oct. 16	Jan. 14	Aug. 15
United States.....	180.0	174.1	139.3	97.8	93.5
Atlanta, Ga.....	177.5	173.4	140.5	94.3	92.5
Baltimore, Md.....	186.1	180.1	147.5	97.9	94.7
Birmingham, Ala.....	183.0	176.6	144.2	96.0	90.7
Boston, Mass.....	174.4	168.0	133.3	95.2	93.5
Bridgeport, Conn.....	175.9	168.9	136.4	96.5	93.2
Buffalo, N. Y.....	168.4	164.7	135.6	100.2	94.5
Butte, Mont.....	175.6	170.0	136.7	98.7	94.1
Cedar Rapids, Iowa <sup>3</sup> .....	184.8	180.0	142.2	95.9	-----
Charleston, S. C.....	173.0	170.4	139.4	95.9	95.1
Chicago, Ill.....	183.4	176.2	137.8	98.2	92.3
Cincinnati, Ohio.....	171.3	169.3	139.0	96.5	90.4
Cleveland, Ohio.....	183.1	179.3	143.3	99.2	93.6
Columbus, Ohio.....	171.6	161.9	132.6	93.4	88.1
Dallas, Tex.....	177.0	173.0	137.1	92.6	91.7
Denver, Colo.....	171.4	170.1	138.0	94.8	92.7
Detroit, Mich.....	173.9	168.4	136.4	97.0	90.6
Fall River, Mass.....	175.6	168.4	132.8	97.5	95.4
Houston, Tex.....	174.7	173.5	139.7	102.6	97.8
Indianapolis, Ind.....	175.9	172.4	136.0	98.2	90.7
Jackson, Miss. <sup>3</sup> .....	195.8	189.0	150.0	105.3	-----
Jacksonville, Fla.....	180.7	180.7	149.0	98.8	95.8
Kansas City, Mo.....	166.6	165.3	132.9	92.4	91.5
Knoxville, Tenn. <sup>3</sup> .....	201.5	197.8	161.1	97.1	-----
Little Rock, Ark.....	172.3	168.6	138.3	95.6	94.0
Los Angeles, Calif.....	182.8	176.5	147.2	101.8	94.6

See footnotes at end of table.

TABLE 4

Louisville  
Manchest  
Memphis  
Milwauke  
Minneapo

Mobile, A  
Newark, N  
New Hav  
New Orie  
New York

Norfolk, V  
Omaha, N  
Peoria, Ill  
Philadelp  
Pittsburg

Portland,  
Portland,  
Providenc  
Richmond  
Rochester

St. Louis,  
St. Paul,  
Salt Lake  
San Fran  
Savannah

Scranton,  
Seattle, W  
Springfie  
Washingt  
Wichita, K  
Winston-S

<sup>1</sup> Aggreg  
chases by  
of populat  
<sup>2</sup> Prelim  
<sup>3</sup> June 1  
<sup>4</sup> Prices  
chuck rot  
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TABLE

Yes

1913.....  
1914.....  
1915.....  
1916.....  
1917.....  
1918.....  
1919.....  
1920.....  
1921.....  
1922.....  
1923.....  
1924.....  
1925.....  
1926.....  
1927.....

TABLE 4.—*Indexes of Average Retail Prices of All Foods, by Cities,<sup>1</sup> on Specified Dates—Continued*

[1935-39=100]

City	1946		1945	1941	1939
	Oct. 15	Sept. 17	Oct. 16	Jan. 14	Aug. 15
Louisville, Ky.	167.4	163.7	133.5	95.5	92.1
Manchester, N. H.	176.9	170.0	134.6	96.6	94.9
Memphis, Tenn.	191.0	185.3	148.6	94.2	89.7
Milwaukee, Wis.	174.8	170.3	137.4	95.9	91.1
Minneapolis, Minn.	177.6	167.9	132.6	99.0	95.0
Mobile, Ala.	182.8	176.4	148.1	97.9	95.5
Newark, N. J.	179.5	170.9	141.0	98.8	95.6
New Haven, Conn.	173.9	166.8	135.5	95.7	93.7
New Orleans, La.	196.0	190.7	154.4	101.9	97.6
New York, N. Y.	186.7	178.8	139.5	90.5	95.8
Norfolk, Va.	189.3	177.4	144.3	95.8	93.6
Omaha, Nebr.	178.2	171.0	131.1	97.9	92.3
Peoria, Ill.	188.9	183.8	145.5	99.0	93.4
Philadelphia, Pa.	177.6	172.6	137.2	95.0	93.0
Pittsburgh, Pa.	179.3	176.9	140.0	98.0	92.5
Portland, Maine	173.5	167.0	133.0	95.3	95.9
Portland, Oreg.	183.7	184.5	149.7	101.7	96.1
Providence, R. I.	184.1	175.9	139.1	96.3	93.7
Richmond, Va.	175.9	167.4	137.7	93.7	92.2
Rochester, N. Y.	172.5	165.7	134.7	99.9	92.3
St. Louis, Mo.	183.6	174.5	141.4	99.2	93.8
St. Paul, Minn.	176.2	164.6	131.4	98.6	94.3
Salt Lake City, Utah	180.6	175.4	144.5	97.5	94.6
San Francisco, Calif.	191.4	186.5	147.9	99.6	93.8
Savannah, Ga.	192.6	190.9	155.4	100.5	96.7
Scranton, Pa.	182.5	174.0	138.7	97.5	92.1
Seattle, Wash.	186.1	175.6	142.7	101.0	94.5
Springfield, Ill.	181.7	179.8	145.0	96.2	94.1
Washington, D. C.	180.6	174.7	140.2	97.7	94.1
Wichita, Kans. <sup>3</sup>	189.2	186.6	148.3	97.2	-----
Winston-Salem, N. C. <sup>3</sup>	184.3	179.2	142.6	93.7	-----

<sup>1</sup> Aggregate costs of 61 foods in each city (54 foods prior to March 1943), weighted to represent total purchases by wage earners and low-salaried workers, have been combined for the United States with the use of population weights. Primary use is for time-to-time comparisons rather than place-to-place comparisons.

<sup>2</sup> Preliminary.

<sup>3</sup> June 1940=100.

<sup>4</sup> Prices were held at August levels as follows: Pork—all cities, round steak—28 cities, rib roast—33 cities, chuck roast—32 cities, beef liver—38 cities, hamburger—30 cities, veal cutlets—41 cities, leg of lamb—35 cities, lamb chops—33 cities.

TABLE 5.—*Indexes of Retail Food Prices in 56 Large Cities Combined, 1913 to October 1946*

[1935-39=100]

Year	All-foods index	Year	All-foods index	Year and month	All-foods index	Year and month	All-foods index
1913	79.9	1928	130.8	1943	138.0	1945—Con.	
1914	81.8	1929	132.5	1944	136.1	November	140.1
1915	80.9	1930	126.0	1945	139.1	December	141.4
1916	90.8	1931	103.9				
1917	116.9	1932	86.5	1945		1946	
1918	134.4	1933	84.1	January	137.3	January	141.0
1919	149.8	1934	93.7	February	136.5	February	139.6
				March	135.9	March	140.1
1920	168.8	1935	100.4	April	136.6	April	141.7
1921	128.3	1936	101.3	May	138.8	May	142.6
1922	119.9	1937	105.3	June	141.1	June	145.6
1923	124.0	1938	97.8	July	141.7	July	145.7
1924	122.8	1939	95.2	August	140.9	August	171.2
1925	132.9	1940	96.6	September	139.4	September	174.1
1926	137.4	1941	105.5	October	139.3	October	180.0
1927	132.3	1942	123.9				



## Wholesale Prices in October 1946

AVERAGE primary market prices <sup>1</sup> advanced 6.9 percent between September and October largely because of higher agricultural prices, but there were small increases in most other commodity groups. In addition, current prices of motor vehicles were introduced into October calculations,<sup>2</sup> so that the October index of commodity prices was increased to 134.1 percent of the 1926 average—26.6 percent above October 1945 and 78.8 percent above August 1939.

Prices of farm products and foods rose 7.1 percent and 19.7 percent respectively during the month, led by increases for meats. Prices of all commodities other than farm products and foods (not including current motor vehicle prices) averaged 0.9 percent higher. Textile products, chemicals and allied products, housefurnishings goods, and miscellaneous commodities increased about 2 percent; building materials and hides and leather products less than 1 percent. There was a slight decline in the group index for fuel and lighting materials. Prices of raw materials were 5.2 percent higher, semimanufactured articles 2.8 percent, and manufactured products 10.6 percent (excluding motor vehicles, 8.4 percent).

The advance of 7.1 percent for farm products was due mainly to higher prices for livestock, which increased sharply immediately after their removal from control in mid-October; substantially higher prices prevailed throughout the remainder of the month, despite record shipments to market. Quotations for hogs and steers in October averaged more than 22 percent above September and prices advanced substantially for calves, cows, and lambs. Increased supplies of livestock led to reduced demand and lower prices for live poultry. Grain quotations rose over 2 percent, largely reflecting short supplies because of a boxcar shortage and a tendency to withhold shipments pending decision on ceiling increases or decontrol of flour. Corn, however, declined in price with larger shipments of the new crop and decreased demand for livestock feed. Egg quotations advanced steadily to mid-October, reflecting heavy demand as a meat substitute, but declined in late October; average prices for the month were higher. Except for potatoes and onions, both in liberal supply, prices of fresh fruits and vegetables were generally higher. Higher prices were allowed for fluid milk under Federal milk marketing agreements. Flaxseed and tobacco, exempt from OPA control, advanced. There were increases in Commodity Credit Corporation selling prices of

<sup>1</sup> The Bureau of Labor Statistics wholesale price data, for the most part, represent prices in primary markets. In general, the prices are those charged by manufacturers or producers or are those prevailing on commodity exchanges. The monthly index is calculated from a monthly average of one-day-a-week prices. It should not be compared directly with the weekly wholesale prices index, which is designed as an indicator of week to week changes. Indexes for the last 2 months are preliminary.

<sup>2</sup> See footnote 1 to table 1.

domestic wools to cover parity. Quotations for foreign wools also advanced to meet higher prices in Australian and South American markets. Cotton quotations reached 20-year highs during the month, but broke sharply late in the month with spot prices falling 5 cents a pound in 10 days.

Meat prices, largely responsible for the 19.7-percent rise in food prices, nearly doubled in mid-October immediately upon decontrol and averaged 45.8 percent higher for the month. Beef, pork, and veal were up more than 50 percent and lamb and mutton about 40 percent. There were small increases for dressed poultry. Prices of most dairy products advanced—by amounts ranging from 4 to 20 percent. Dried fruits of the new pack, exempt from OPA control, were priced well above old-pack ceiling levels. Increases from about 10 percent to as high as 85 percent occurred for a number of other foods removed from OPA control, including lard, tallow, edible oils, cocoa, coffee, and black pepper.

Higher prices for most textile groups contributed to the average price rise of 2.3 percent in textile products for the month. Further upward adjustments of OPA ceilings to cover higher costs of raw cotton, as required by the Price Control Extension Act of 1946, led to higher prices of many cotton fabrics, artificial leather, and some cotton clothing. There also were advances for some woolen fabrics reflecting higher costs. Prices of raw silk declined because of lack of demand at current high prices for manufactured silk products. Raw jute quotations increased.

Prices of most metals and metal products were unchanged during the month. The introduction of current prices of motor vehicles, however, raised the October index for the group 10 percent. Motor vehicles, unavailable to civilians during the war, had been carried at April 1942 prices in the index. Average prices in October 1946 were 27.0 percent above these levels. During the month there were small increases for some nonferrous metals, gray iron castings, and farm machinery, reflecting ceiling adjustments.

Higher prices of prepared paint because of increased costs of linseed oil and also of paint materials largely accounted for the 0.7 percent increase in building material prices. Linseed oil, naval stores, and several colors, exempt from OPA control, advanced in price, and ethyl acetate prices were up sharply following ceiling adjustments. Prices for shellac and zinc oxide declined. Incentive ceiling adjustments for shop lumber sold directly to millwork manufacturers resulted in substantial increases for some lumber, and ceiling increases were allowed also for millwork and window glass. Prices of Douglas fir lath declined with partial cancellation of an earlier ceiling increase.

Chemicals and allied products advanced 1.5 percent as a group because of sharp increases for a number of decontrolled commodities in

short supply, including fats and oils, inedible tallow, opium, and cottonseed meal. Prices of acetone, dynamite, and castor oil advanced following upward ceiling adjustments. Lower raw-materials costs made possible substantial lowering of prices of cream of tartar and tartaric acid. Ergot prices dropped with larger supplies from Portugal.

Price increases for housefurnishings, which rose 1.5 percent as a group, generally followed upward ceiling adjustments. Advances for cotton blankets, sheets and pillowcases, tablecloths, and oilcloth reflected higher costs of raw cotton. Linoleum prices rose because of higher costs of linseed oil. Other articles which advanced in price included sewing machines, furniture, mattresses and bedsprings, floor coverings, dinnerware, and window shades.

Miscellaneous commodities rose 1.9 percent during the month. Sharp price advances for cattle feed occurred late in the month after removal from price control. Lubricating oils and tobacco products, also exempt from price control, rose in price. Higher ceilings were followed by price rises for newsprint, tissue paper, and woodpulp.

TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities October 1946, Compared with Previous Months*

Groups and subgroups	Indexes (1926=100)				Percentage changes to October 1946 from—		
	Oct. 1946	Sept. 1946	Oct. 1945	Aug. 1939	Sept. 1946	Oct. 1945	Aug. 1939
All commodities.....	134.1	124.0	105.9	75.0	+8.1	+26.6	+78.8
Farm products.....	165.3	154.3	127.3	61.0	+7.1	+29.9	+171.0
Grains.....	174.2	170.6	130.2	51.5	+2.1	+33.8	+238.3
Livestock and poultry.....	174.6	150.4	130.5	66.0	+16.1	+33.8	+164.5
Other farm products.....	156.1	151.1	123.6	60.1	+3.3	+26.3	+159.7
Foods.....	157.9	131.9	105.7	67.2	+19.7	+49.4	+135.0
Dairy products.....	185.5	169.1	110.4	67.9	+9.7	+68.0	+173.2
Cereal products.....	128.5	127.4	95.3	71.9	+9	+34.8	+78.7
Fruits and vegetables.....	122.5	115.5	116.3	58.5	+6.1	+5.3	+109.4
Meats.....	191.4	131.3	107.9	73.7	+45.8	+77.4	+159.7
Other foods.....	136.2	115.5	98.5	60.3	+17.9	+38.3	+125.9
Hides and leather products.....	142.4	141.6	118.6	92.7	+6	+20.1	+53.6
Shoes.....	145.2	144.8	126.3	100.8	+3	+15.0	+44.0
Hides and skins.....	153.0	151.5	117.6	77.2	+1.0	+30.1	+98.2
Leather.....	138.5	138.5	103.8	84.0	0	+33.4	+64.9
Other leather products.....	118.6	115.8	115.2	97.1	+2.4	+3.0	+22.1
Textile products.....	128.6	125.7	101.0	67.8	+2.3	+27.3	+89.7
Clothing.....	125.5	122.9	107.4	81.5	+2.1	+16.9	+54.0
Cotton goods.....	172.9	166.6	125.0	65.5	+3.8	+38.3	+164.0
Hosiery and underwear.....	88.8	88.7	71.5	61.5	+1	+24.2	+44.4
Rayon.....	30.2	30.2	30.2	28.5	0	0	+6.0
Silk.....	125.7	126.5	(2)	44.3	-6		+183.7
Woolen and worsted goods.....	116.6	113.9	112.7	75.5	+2.4	+3.5	+54.4
Other textile products.....	130.6	126.7	101.4	63.7	+3.1	+28.8	+105.0
Fuel and lighting materials.....	94.2	94.3	84.2	72.6	-1	+11.9	+29.8
Anthracite.....	113.5	113.5	102.2	72.1	0	+11.1	+57.4
Bituminous coal.....	137.2	137.0	124.8	96.0	+1	+9.9	+42.9
Coke.....	147.5	147.5	134.9	104.2	0	+9.3	+41.6
Electricity.....	(2)	(2)	66.7	75.8			
Gas.....	(2)	80.6	79.8	86.7			
Petroleum and products.....	73.1	73.0	62.1	51.7	+1	+17.7	+41.4

See footnotes at end of table.

TABLE 1

Metals and  
Agriculture  
Farm  
Iron and  
Motor  
Nonferrous  
Plumbing

Building  
Brick  
Cement  
Lumber  
Paint  
Plumbing  
Structural  
Other

Chemicals  
Chemical  
Drugs  
Fertilizers  
Mixed  
Oils and

Housefurnishings  
Furniture  
Furniture

Miscellaneous  
Automobile  
Cattle  
Paper  
Rubber  
Other

Raw materials  
Semi-manufactured  
Manufactured  
All commodities  
All commodities  
and food

<sup>1</sup> Index of  
Motor vehicle  
rate of civil  
introduces  
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All commodities  
Metals and  
Manufactured

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<sup>2</sup> Not av



TABLE 1.—*Indexes of Wholesale Prices by Groups and Subgroups of Commodities October 1946, Compared with Previous Months—Continued*

Groups and subgroups	Indexes (1926=100)				Percentage changes to October 1946 from—		
	Oct. 1946	Sept. 1946	Oct. 1945	Aug. 1939	Sept. 1946	Oct. 1945	Aug. 1939
Metals and metal products.....	<sup>1</sup> 125.7	114.2	105.0	93.2	+10.1	+19.7	+34.9
Agricultural implements.....	108.7	108.6	97.9	93.5	+1	+11.0	+16.3
Farm machinery.....	109.9	109.8	98.9	94.7	+1	+11.1	+16.1
Iron and steel.....	113.7	113.5	99.8	95.1	+2	+13.9	+19.6
Motor vehicles.....	<sup>1</sup> 143.3	( <sup>2</sup> )	112.8	92.5	-----	+27.0	+54.9
Nonferrous metals.....	101.8	101.4	85.7	74.6	+4	+18.8	+36.5
Plumbing and heating.....	107.2	107.2	95.0	79.3	0	+12.8	+35.2
Building materials.....	134.8	133.8	118.3	89.6	+7	+13.9	+50.4
Brick and tile.....	127.8	127.7	115.2	90.5	+1	+10.9	+41.2
Cement.....	106.5	106.5	99.9	91.3	0	+6.6	+16.6
Lumber.....	178.9	178.2	155.2	90.1	+4	+15.3	+98.6
Paint and paint materials.....	119.2	116.7	107.6	82.1	+2.1	+10.8	+45.2
Plumbing and heating.....	107.2	107.2	95.0	79.3	0	+12.8	+35.2
Structural steel.....	120.1	120.1	107.3	107.3	0	+11.9	+11.9
Other building materials.....	122.5	121.4	104.6	89.5	+9	+17.1	+36.9
Chemicals and allied products.....	99.9	98.4	95.5	74.2	+1.5	+4.6	+34.6
Chemicals.....	98.8	98.6	96.4	83.8	+2	+2.5	+17.9
Drugs and pharmaceuticals.....	111.5	110.3	110.3	77.1	+1.1	+1.1	+44.6
Fertilizer materials.....	91.9	90.2	81.9	65.5	+1.9	+12.2	+40.3
Mixed fertilizers.....	90.5	90.0	86.6	73.1	+6	+4.5	+23.8
Oils and fats.....	111.1	103.3	102.0	40.6	+7.6	+8.9	+173.6
Housefurnishing goods.....	115.3	113.6	104.7	85.6	+1.5	+10.1	+34.7
Furnishings.....	121.3	119.4	107.9	90.0	+1.6	+12.4	+34.8
Furniture.....	109.2	107.5	101.6	81.1	+1.6	+7.5	+34.6
Miscellaneous.....	104.0	102.1	94.8	73.3	+1.9	+9.7	+41.9
Automobile tires and tubes.....	73.0	73.0	73.0	60.5	0	0	+20.7
Cattle feed.....	217.2	201.8	159.6	68.4	+7.6	+36.1	+217.5
Paper and pulp.....	124.6	121.9	109.3	80.0	+2.2	+14.0	+55.8
Rubber, crude.....	46.2	46.2	46.2	34.9	0	0	+32.4
Other miscellaneous.....	108.2	106.5	98.9	81.3	+1.6	+9.4	+33.1
Raw materials.....	148.7	141.4	116.6	66.5	+5.2	+27.5	+123.6
Semimanufactured articles.....	118.2	115.0	96.8	74.5	+2.8	+22.1	+58.7
Manufactured products.....	<sup>1</sup> 129.6	117.2	101.9	79.1	+10.6	+27.2	+63.8
All commodities other than farm products.....	<sup>1</sup> 127.1	117.2	101.0	77.9	+8.4	+25.8	+63.2
All commodities other than farm products and foods.....	<sup>1</sup> 115.7	112.2	100.1	80.1	+3.1	+15.6	+44.4

<sup>1</sup> Index including motor vehicles at current prices.

*Motor vehicles.*—The rate of production of motor vehicles in October 1946 exceeded the monthly average rate of civilian production in 1941, and in accordance with the announcement made last month the Bureau introduced current prices for motor vehicles in the October calculations. During the war, motor vehicles, were not produced for general civilian sale and the Bureau carried April 1942 prices forward in each computation through September 1946.

If April 1942 prices of motor vehicles had been used in computing the October 1946 indexes, the October indexes for the groups of which motor vehicles is a component would have been:

Indexes 1926=100		Indexes 1926=100	
All commodities.....	132.5	All commodities other than farm products.....	125.1
Metals and metal products.....	114.3	All commodities other than farm products and foods.....	113.2
Manufactured products.....	127.0		

These special indexes will be published as long as the need for them continues

<sup>2</sup> Not available.

### Index Numbers by Commodity Groups, 1926 to October 1946

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1945, and by months from October 1945 to October 1946, are shown in table 2.

TABLE 2.—Index Numbers of Wholesale Prices by Groups of Commodities

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous	All commodities
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	95.3
1932.....	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	64.8
1933.....	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.1	75.8	62.5	65.9
1936.....	80.9	82.1	95.4	71.5	76.2	87.0	86.7	78.7	81.7	70.5	80.8
1937.....	86.4	85.5	104.6	76.3	77.6	95.7	95.2	82.6	89.7	77.8	86.3
1938.....	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.0	86.8	73.3	78.6
1939.....	65.3	70.4	95.6	69.7	73.1	94.4	90.5	78.0	86.3	74.8	77.1
1940.....	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	78.6
1941.....	82.4	82.7	108.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	87.3
1942.....	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	98.8
1943.....	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	103.1
1944.....	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	104.0
1945.....	128.2	106.2	118.1	100.1	84.0	104.7	117.8	95.2	104.5	94.7	105.8
<i>1945</i>											
October.....	127.3	105.7	118.6	101.0	84.2	105.0	118.3	95.5	104.7	94.8	105.9
November.....	131.1	107.9	118.8	101.1	84.6	105.2	118.7	95.7	104.7	94.8	106.8
December.....	131.5	108.6	118.9	101.4	84.8	105.6	119.5	96.1	104.7	94.8	107.1
<i>1946</i>											
January.....	129.9	107.3	119.4	101.6	84.9	105.7	120.0	96.0	106.2	95.3	107.1
February.....	130.8	107.8	119.6	102.2	85.1	106.6	120.9	95.9	106.5	95.6	107.7
March.....	133.4	109.4	119.8	104.7	85.0	108.4	124.9	96.0	106.9	95.6	108.9
April.....	135.4	110.8	119.8	107.9	86.1	108.8	126.5	96.1	107.5	95.7	110.2
May.....	137.5	111.5	120.4	108.8	86.1	109.4	127.8	96.5	108.3	97.0	111.0
June.....	140.1	112.9	122.4	109.2	87.8	112.2	129.9	96.4	110.4	98.5	112.9
July.....	157.0	140.2	141.2	118.1	90.3	113.3	132.1	99.3	111.9	101.3	124.7
August.....	161.0	149.0	138.9	124.0	94.4	114.0	132.7	98.4	112.6	102.0	129.1
September.....	154.3	131.9	141.6	125.7	94.3	114.2	133.8	98.4	113.6	102.1	124.0
October.....	165.3	157.9	142.4	128.6	94.2	125.7	134.8	99.9	115.3	104.0	134.1

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, manufactured products, commodities other than farm products and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Manufactured products" was shown on pages 10 and 11 of Wholesale Prices, July-December and year 1943 (Bulletin No. 785).

TABLE 3.—Index Numbers of Wholesale Prices by Special Groups of Commodities

[1926=100]

Year	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods	Year and month	Raw materials	Semi-manufactured articles	Manufactured products	All commodities other than farm products	All commodities other than farm products and foods
1926	100.0	100.0	100.0	100.0	100.0	1945					
1929	97.5	93.9	94.5	93.3	91.6	October	116.6	96.8	101.9	101.0	100.1
1932	55.1	59.3	70.3	68.3	70.2	November	118.9	96.9	102.2	101.3	100.2
1933	56.5	65.4	70.5	69.0	71.2	December	119.2	97.6	102.5	101.6	100.5
1936	79.9	75.9	82.0	80.7	79.6	1946					
1937	84.8	85.3	87.2	86.2	85.3	January	118.3	97.6	102.9	101.9	100.8
1938	72.0	75.4	82.2	80.6	81.7	February	118.9	98.8	103.4	102.5	101.3
1939	70.2	77.0	80.4	79.5	81.3	March	120.5	100.4	104.5	103.4	102.2
1940	71.9	79.1	81.6	80.8	83.0	April	122.2	101.1	105.5	104.5	103.3
1941	83.5	86.9	89.1	88.3	89.0	May	123.6	101.9	106.1	105.1	103.9
						June	126.3	105.7	107.3	106.7	105.6
1942	100.6	92.6	98.6	97.0	95.5	July	141.7	110.2	118.9	117.5	109.5
1943	112.1	92.9	100.1	98.7	96.9	August	145.7	111.9	123.9	121.9	111.6
1944	113.2	94.1	100.8	99.6	98.5	September	141.4	115.0	117.2	117.2	112.2
1945	116.8	95.9	101.8	100.8	99.7	October	148.7	118.2	129.6	127.1	115.7

## Weekly Fluctuations

Weekly changes in wholesale prices by groups of commodities during September and October 1946 are shown by the index numbers in table 4. These indexes are not averaged to obtain an index for the month but are computed only to indicate the fluctuations from week to week.

TABLE 4.—Weekly Index Numbers of Wholesale Prices by Commodity Groups, September and October 1946

[1926=100]

Commodity group	Oct. 26	Oct. 19	Oct. 12	Oct. 5	Sept. 28	Sept. 21	Sept. 14	Sept. 7
All commodities	135.9	135.1	126.0	125.1	124.4	123.8	121.7	122.0
Farm products	170.1	160.1	160.2	158.0	156.6	155.1	151.8	150.4
Foods	169.9	175.6	137.7	135.5	133.0	131.9	128.1	130.7
Hides and leather products	143.3	141.5	141.3	141.1	140.9	139.4	139.7	139.6
Textile products	126.5	126.3	126.1	125.9	125.4	123.7	117.5	117.3
Fuel and lighting materials	95.0	95.0	95.0	95.0	95.1	95.3	95.2	95.1
Metals and metal products	114.4	114.4	114.2	114.2	114.2	114.2	113.6	113.6
Building materials	134.2	134.2	134.1	134.1	134.0	133.9	133.3	133.1
Chemicals and allied products	99.5	98.8	98.8	98.6	98.2	98.4	97.9	97.9
Housefurnishing goods	115.9	115.7	115.3	115.1	115.0	114.7	114.3	114.1
Miscellaneous	103.7	102.5	102.2	102.2	101.8	101.8	101.9	101.3
Raw materials	153.0	146.3	146.3	144.5	143.6	142.5	138.4	137.5
Semi-manufactured articles	117.7	117.5	117.1	116.9	116.7	116.2	111.9	111.5
Manufactured products	131.7	133.7	118.6	118.1	117.5	117.1	115.9	116.9
All commodities other than farm products	128.5	129.7	118.4	117.8	117.4	116.9	115.1	115.8
All commodities other than farm products and foods	113.1	112.8	112.6	112.6	112.4	112.1	111.0	110.8



# Construction

## Construction Activity, September-November 1946

### Progress on the Housing Program

WELL over a third of a million (366,400) new permanent dwellings were under construction and almost the same number (340,700) had been completed by the end of October 1946. It is estimated that practically all of the dwellings under construction in October had been started this year. While about a third of all the completed units were begun in 1945, the remaining two-thirds accounted for a substantial proportion (37 percent) of the 580,600 new permanent dwellings started thus far in 1946.

The new permanent dwellings discussed here account for about 2 in every 3 of all the units begun and completed during the Veterans' Emergency Housing Program. The VEHP includes, in addition to the new permanent units, conversion, trailer, and temporary re-use accommodations.

All but a very small proportion (1.4 percent) of the new permanent units begun in October were privately financed. Average construction cost of 1-family privately financed homes (as distinguished from selling price) increased only about 6 percent between January and October of this year in spite of the fact that materials and labor costs in general advanced more. Average construction cost for private 1-family houses started this October was only about 1 percent higher than last December when all controls on selling price had been lifted. The relative stabilization in average construction cost of private single-family homes this year can be attributed directly to regulations governing the selling price and rentals of units for which authorization was given under Priorities Regulation 33, initiated in January of this year. It was possible in this way to bring about construction of a much greater proportion of smaller and cheaper houses than might otherwise have been built, placing the new units within the range of more of the veterans wanting to buy homes.

A total of 616,000 workers were employed at the site of new residential construction in October, and 380 million dollars were spent for this work.

TABLE 1.—*Number of Family Dwelling Units or Equivalent Living Accommodations Started and Completed in Nonfarm Areas, January–October, 1946*<sup>1</sup>

Month	Number of units					
	Started			Completed		
	Total	New permanent family dwellings <sup>2</sup>	Other <sup>3</sup>	Total	New permanent family dwellings <sup>4</sup>	Other <sup>5</sup>
First 10 months of 1946.....	882, 900	580, 600	302, 300	499, 900	340, 700	159, 200
January.....	49, 300	36, 100	13, 200	25, 900	18, 700	7, 200
February.....	56, 600	43, 100	13, 500	29, 200	20, 300	8, 900
March.....	86, 500	60, 400	26, 100	32, 200	22, 600	9, 600
April.....	96, 800	66, 100	30, 700	37, 200	26, 400	10, 800
May.....	105, 500	67, 500	38, 000	41, 900	30, 300	11, 600
June.....	95, 700	63, 600	32, 100	48, 700	34, 900	13, 800
July.....	106, 000	64, 300	41, 700	57, 700	41, 000	16, 700
August.....	104, 200	64, 400	39, 800	62, 000	42, 200	19, 800
September.....	104, 300	57, 100	47, 200	81, 300	49, 800	31, 500
October.....	78, 000	58, 000	20, 000	83, 800	54, 500	29, 300

<sup>1</sup> Excludes military barracks.<sup>2</sup> Includes 8,027 permanent units started by New York City Housing Authority, and 30,800 prefabricated units (National Housing Agency estimate).<sup>3</sup> Covers 51,100 privately financed converted units; 191,600 Federal (Mead-Lanham temporary housing program) units (150,900 family dwellings and 40,700 dormitory equivalents—Federal Public Housing Authority estimates); 36,200 trailers (Bureau of the Census); and 23,400 family and dormitory equivalent units financed by various State and local public bodies and educational institutions. These units are not included under the Federal Mead-Lanham temporary housing program. A small proportion of new permanent units provided in the local emergency program, now included under "Other" will be shown for all months in the column for new permanent housing in future publications of this table.<sup>4</sup> Break-down not available for conventional and prefabricated units.<sup>5</sup> Covers 50,400 conversion units, 69,100 re-use units, 36,200 trailers, and 3,500 local emergency units.

### Total Construction Activity

Construction employment and expenditures in November, according to preliminary estimates, continued the downward trend which started in October. In spite of these declines, the level of activity was twice that of a year ago. There were 109,000 fewer workers employed on construction this November than in the preceding month, and the dollar volume of work put in place was 67 million dollars below the October total. In November 1946, total construction employment amounted to 2,184,000, compared with 1,183,000 last November; corresponding expenditures figures are 1,162 million dollars and 555 million dollars.

Privately financed industrial building and National Housing Agency's re-use homebuilding projects are the only two major construction categories which did not undergo a decline in expenditures during November. Industrial building, at 230 million dollars, was slightly higher than in October, and re-use housing rose from 5 million to 55 million dollars. Seasonal drops of 22 million dollars in farm construction and 15 million in highway construction accounted for the greatest portion of the over-all decline in expenditures during November. Private builders spent 10 million dollars less for new residential construction and 6 million less for commercial building.

Employment, too, was down in practically all classes of construction. The 783,000 persons working on construction and repair of nonfarm homes were 17,000 below October; nonresidential building and repair engaged 807,000 in November, or 13,000 fewer than in the preceding month. Despite continuing seasonal declines, construction employment in November topped the 2-million mark for the sixth successive month in 1946.

TABLE 2.—*Estimated Construction Employment<sup>1</sup> in the United States, Selected Months of 1945 and 1946*

Type of project	Estimated employment (in thousands)			
	1946			November 1945 <sup>2</sup>
	November <sup>3</sup>	October <sup>3</sup>	September <sup>3</sup>	
All types.....	2,184	2,293	2,313	1,183
New construction.....	1,885	1,986	2,014	941
Private construction.....	1,423	1,505	1,544	711
Residential (nonfarm) building.....	578	603	621	239
Nonresidential building.....	641	655	653	313
Farm construction.....	42	85	106	24
Public utilities.....	162	162	164	135
Public construction.....	462	481	470	230
Federal <sup>4</sup> .....	279	272	247	132
Residential building.....	126	115	100	6
Nonresidential building.....	35	31	27	70
Reclamation.....	9	10	11	7
River, harbor, and flood control.....	34	33	29	20
Streets and highways.....	55	63	64	11
All other <sup>5</sup> .....	20	20	16	18
Non-Federal.....	183	209	223	98
Streets and highways.....	88	102	105	38
All other <sup>6</sup> .....	95	107	118	60
Minor building repairs.....	299	307	299	242
Residential (nonfarm).....	79	82	86	69
Nonresidential.....	131	134	133	116
Farm construction.....	89	91	80	57

<sup>1</sup> Estimates include wage earners, salaried employees, and special trades contractors actively engaged on new construction, additions and alterations, and on repair work of the type usually covered by building permits, whether performed under contract or by force-account. (Force-account employees are workers hired directly by the owner and utilized as a separate work force to perform construction work of the type usually chargeable to capital account.) These figures should not be confused with those included in the Bureau's nonagricultural employment series, which covers only employees of construction contractors and Federal force-account workers, and excludes force-account workers of State and local governments, public utilities, and private firms.

<sup>2</sup> Preliminary.

<sup>3</sup> Revised.

<sup>4</sup> Includes the following force-account employees hired directly by the Federal Government: November 1945, 16,800; September 1946, 21,700; October 1946, 20,900; November 1946, 20,000.

<sup>5</sup> Mainly airports, water and sewer systems, and electrification projects.

<sup>6</sup> Includes community buildings, water supply and sewage disposal projects, and miscellaneous public-service enterprises.

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TABLE 3.—*Estimated Construction Expenditures<sup>1</sup> in Continental United States, Selected Months in 1945-1946*

Type of construction	Estimated expenditures (in millions)					
	1946			No- vember 1945	First 11 month of—	
	Novem- ber <sup>2</sup>	Octo- ber <sup>2</sup>	Septem- ber <sup>2</sup>		1946	1945
Total construction.....	\$1, 162	\$1, 229	\$1, 250	\$555	\$10, 904	\$5, 091
New construction <sup>4</sup> .....	988	1, 050	1, 075	437	9, 224	4, 113
Private construction.....	750	784	804	309	7, 271	2, 199
Residential (nonfarm) building.....	320	330	340	98	3, 003	554
Nonresidential building.....	332	337	335	138	3, 162	852
Industrial.....	192	191	186	80	1, 628	221
Commercial.....	87	93	96	34	1, 039	153
All other.....	53	53	53	24	495	478
Farm construction.....	20	40	50	10	340	186
Public utilities.....	78	77	79	63	766	607
Public construction.....	238	266	271	128	1, 953	1, 914
Residential building.....	55	50	45	2	256	69
Nonresidential (except military and naval fa- cilities).....	27	32	35	30	296	755
Industrial facilities.....	7	9	9	11	79	589
All other.....	20	23	26	19	217	166
Military and naval facilities <sup>5</sup> .....	15	19	16	34	169	544
Highway.....	90	105	108	31	739	281
Other public.....	51	60	67	31	493	265
Federal <sup>6</sup> .....	24	27	31	15	236	127
State and local <sup>7</sup> .....	27	33	36	16	257	138
Minor building repairs <sup>8</sup> .....	174	179	175	118	1, 680	978
Residential (nonfarm).....	45	47	47	34	488	277
Nonresidential.....	71	72	73	52	716	409
Farm construction.....	58	60	55	32	476	292

<sup>1</sup> Estimated construction expenditures represent the monetary value of the volume of work put in place in continental United States during a given period of time. These figures should not be confused with the data on value of construction reported in the table on urban building construction (table 4).

<sup>2</sup> Preliminary.

<sup>3</sup> Revised.

<sup>4</sup> Estimates of new construction are prepared jointly by the Bureau of Labor Statistics and the Office of Domestic Commerce (a successor to the Bureau of Foreign and Domestic Commerce) and include expenditures for new construction, major additions, and alterations.

<sup>5</sup> Expenditures for floating dry docks and facilities for the production of atomic bombs are excluded.

<sup>6</sup> Mainly river, harbor, flood control, reclamation, and power projects.

<sup>7</sup> Includes water supply, sewage disposal, and miscellaneous public-service enterprises.

<sup>8</sup> Covers privately financed structural repairs of the type for which building permits are generally required.

### Urban Building

Permit valuations of building construction in urban areas (including the value of Federal construction contracts awarded) amounted to 332 million dollars for October—a decrease since September of 9 million dollars. Less employment and lower expenditures in this field of construction may be expected in the next month or two, since decreases in building permits indicate a decline in the volume of construction to be started.

Valuations of both new residential and new nonresidential construction in urban areas decreased somewhat during the month, to 190 million and 84 million dollars, respectively. Additions, alterations, and repairs, on the other hand, rose slightly to reach an October

total of 58 million dollars—continuing the steady increase that has been evidenced since June. Restrictions on new construction are, apparently, causing owners to repair and to improve available structures in an effort to meet part way the current demand.

TABLE 4.—*Permit Valuation<sup>1</sup> of Urban Building Construction,<sup>2</sup> by Class of Construction and by Source of Funds, Selected Months of 1945 and 1946*

Class of construction	Valuation (in millions)				
	1946		October 1945	First 10 months of—	
	Octo- ber <sup>3</sup>	Septem- ber <sup>4</sup>		1946 <sup>5</sup>	1945
Total					
All building construction.....	\$332	\$341	\$267	\$4, 071	\$1, 466
New residential <sup>6</sup> .....	190	194	93	2, 108	474
New nonresidential.....	84	90	110	1, 293	586
Additions, alterations, and repairs.....	58	57	64	670	406
Non-Federal					
All building construction.....	321	317	260	3, 790	1, 224
New residential <sup>6</sup> .....	181	174	93	1, 874	444
New nonresidential.....	84	90	106	1, 271	402
Additions, alterations, and repairs.....	56	53	61	645	378
Federal					
All building construction.....	<sup>8</sup> 11	24	7	<sup>7</sup> 281	242
New residential <sup>6</sup> .....	<sup>8</sup> 9	20	( <sup>9</sup> )	<sup>7</sup> 234	30
New nonresidential.....	( <sup>9</sup> )	( <sup>9</sup> )	4	22	184
Additions, alterations, and repairs.....	2	4	3	25	28

<sup>1</sup> Includes value of Federal construction contracts awarded.

<sup>2</sup> Estimates of non-Federal (private, and State and local government) urban building construction are based upon building permit reports received from places containing about 85 percent of the urban population of the country; estimates of federally financed projects are compiled from notifications of construction contracts awarded, which are obtained from other Federal agencies.

<sup>3</sup> Preliminary.

<sup>4</sup> Revised.

<sup>5</sup> Includes value of dormitories and other nonhousekeeping residential buildings in addition to housekeeping units shown in table 5.

<sup>6</sup> Includes \$8,440,000, the estimated cost of 1,286 dwelling units in New York City Housing Authority projects. These projects, although financed solely with city funds, are included with Federal projects in order to segregate public from private housing. All other types of building construction financed with State or local government funds are included under "non-Federal."

<sup>7</sup> Includes \$45,188,850, the estimated cost of 8,027 dwelling units contained in New York City Housing Authority projects.

<sup>8</sup> Value less than \$500,000.

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TABLE 5.—*Estimated Number and Permit Valuation <sup>1</sup> of New Dwelling Units Scheduled To Be Started in All Urban Areas,<sup>2</sup> Selected Months of 1945 and 1946*

Source of funds and type of dwelling	1946		October 1945	First 10 months of—	
	October <sup>3</sup>	September <sup>4</sup>		1946 <sup>5</sup>	1945
	Number of dwelling units				
All dwellings.....	37, 113	43, 087	19, 830	450, 584	121, 497
Privately financed.....	35, 799	35, 044	19, 496	376, 059	111, 039
1-family.....	29, 491	29, 335	16, 582	316, 657	92, 580
2-family <sup>6</sup> .....	1, 839	2, 050	857	21, 500	6, 938
Multifamily <sup>6</sup> .....	4, 469	3, 659	2, 057	37, 902	11, 521
Federally financed <sup>7</sup> .....	1, 314	8, 043	334	74, 525	10, 458
	Valuation (in thousands)				
All dwellings.....	\$189, 284	\$191, 826	\$91, 484	\$2, 060, 921	\$465, 956
Privately financed.....	180, 784	172, 678	91, 114	1, 841, 386	438, 236
1-family <sup>6</sup> .....	155, 839	150, 795	79, 194	1, 609, 314	377, 033
2-family <sup>6</sup> .....	7, 923	8, 960	3, 551	89, 896	23, 319
Multifamily.....	17, 022	12, 923	8, 369	142, 176	37, 884
Federally financed <sup>7</sup> .....	8, 500	19, 148	370	219, 535	27, 720

<sup>1</sup> Includes value of Federal construction contracts awarded.<sup>2</sup> See footnote 2, table 4, for source of urban estimates.<sup>3</sup> Preliminary.<sup>4</sup> Revised.<sup>5</sup> Includes 1- and 2-family dwellings with stores.<sup>6</sup> Includes multifamily dwellings with stores.<sup>7</sup> For number of, and estimated cost of, dwelling units contained in New York City Housing Authority projects but included here with federally financed housing, see footnotes 6 and 7, table 4.

### Average Hours and Earnings

Both general building and special trades contractors reported additional contracts, some overtime work, and upward wage adjustments, all of which are reflected in September average weekly earnings of \$58.49 for private building construction. This was the highest average weekly earnings figure recorded since January 1940—the beginning of the period for which monthly data are available.

General building contractors reported average hourly earnings for their employees of \$1.45 in September—10 percent higher than a year ago. This 10-percent increase, coupled with a lengthened average workweek, resulted in a \$7 rise over the year in average weekly earnings. Increases during the month, both in the hourly rate (3 cents) and in the hours worked per week ( $\frac{3}{4}$  hour), caused weekly earnings for general building to increase almost \$2 from August to a new high of \$55.64 for September. The earnings of skilled, as well as semiskilled and unskilled, employees of general building contractors are included in the averages.



Average weekly earnings increased both over the year and during the month for all groups in the special building trades, but principally for persons employed in plumbing and heating, painting and decorating, and electrical work. Wage increases during the year caused weekly earnings to rise \$3 from the level of a year ago to \$69.66 for electrical work, \$6.25 to \$63.70 for plumbing and heating, and \$4.53 to \$62.06 for painting and decorating. The increases in weekly earnings from August to September for the three trades were \$2.08, \$2.27, and \$2.31, respectively. A successively longer average workweek for these trades, as well as for carpenters, during July, August, and September reflects a better flow of materials to the job site.

For nonbuilding construction, a longer workweek and generally increased hourly earnings resulted in higher average weekly earnings for the month—\$57.90 in September compared with \$56.24 in August.

TABLE 6.—Average Hours and Earnings on Private Construction Projects for Selected Types of Work, September 1946<sup>1</sup>

[Subject to revision]

Type of work	Average hours per week			Average weekly earnings <sup>2</sup>			Average hourly earnings		
	September 1946	August 1946 <sup>3</sup>	September 1945	September 1946	August 1946 <sup>3</sup>	September 1945	September 1946	August 1946 <sup>3</sup>	September 1945
All types of work.....	39.3	38.7	( <sup>4</sup> )	\$58.39	\$56.61	( <sup>4</sup> )	\$1.485	\$1.462	( <sup>4</sup> )
Building construction.....	38.7	38.2	38.1	58.49	56.67	\$53.11	1.510	1.482	\$1.392
General contractors.....	38.4	37.8	36.9	55.64	53.66	48.56	1.450	1.419	1.317
Special building trades <sup>4</sup> .....	39.2	38.7	39.0	61.87	60.34	56.42	1.580	1.558	1.445
Plumbing and heating.....	40.2	39.5	40.8	63.70	61.43	57.45	1.584	1.555	1.410
Painting and decorating.....	38.6	37.8	39.3	62.06	59.75	57.53	1.609	1.581	1.464
Electrical work.....	41.1	40.3	40.1	69.66	67.58	61.66	1.696	1.678	1.539
Masonry.....	38.1	38.6	37.6	58.53	58.36	58.11	1.537	1.510	1.545
Plastering and lathing.....	38.3	37.7	34.4	65.21	64.60	53.73	1.703	1.716	1.560
Carpentry.....	39.8	39.4	40.2	58.68	56.82	54.39	1.473	1.442	1.353
Roofing and sheet metal.....	38.3	37.7	37.2	54.06	53.30	51.90	1.412	1.414	1.395
Excavation and foundation.....	38.4	38.3	38.4	54.88	54.21	51.51	1.431	1.416	1.341
Nonbuilding construction.....	42.2	41.6	( <sup>4</sup> )	57.90	56.24	( <sup>4</sup> )	1.372	1.353	( <sup>4</sup> )
Streets and highway.....	42.0	40.9	( <sup>4</sup> )	55.71	54.39	( <sup>4</sup> )	1.327	1.331	( <sup>4</sup> )
Heavy construction.....	42.6	42.1	( <sup>4</sup> )	59.86	58.21	( <sup>4</sup> )	1.407	1.382	( <sup>4</sup> )
Other.....	41.3	40.9	( <sup>4</sup> )	54.46	53.40	( <sup>4</sup> )	1.317	1.305	( <sup>4</sup> )

<sup>1</sup> Includes all firms reporting during the months shown (about 9,000) but not necessarily identical establishments.

<sup>2</sup> Hourly earnings when multiplied by weekly hours of work may not exactly equal weekly earnings because of rounding.

<sup>3</sup> Revised.

<sup>4</sup> Not available prior to February 1946.

<sup>5</sup> Includes types not shown separately.

# Trends of Employment and Labor Turn-Over

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## Labor Force, October 1946

### WHO IS COUNTED IN THE LABOR FORCE

**Labor Force.**—Persons 14 years of age and over who are employed or unemployed during the census week (the week containing the eighth day of the month).

**Employed.**—Those who, during the census week, (1) work full or part time for pay or profit; (2) work without pay in a family enterprise (farm or business) at least 15 hours; or (3) have a job but do not work because of illness, vacation, labor-management dispute, bad weather, or lay-off with definite instructions to return to work within 30 days.

**Unemployed.**—Those not working, but seeking a job.

Declines of 120,000 in unemployment and 10,000 in employment combined to reduce the civilian labor force by 130,000 between September and October, according to the Bureau of the Census sample Monthly Report on the Labor Force. The civilian labor force in October numbered 59,310,000, including 57,360,000 employed and 1,950,000 unemployed.

The decline in unemployment brought the number of job seekers below the 2 million mark for the first time in 1946. Unemployment in October was 760,000 below the postwar peak of 2,710,000 reached in March 1946.

The number of unemployed men in October (1,540,000) was more than a million above the VJ-day level. One out of every two unemployed men was a veteran. Unemployed women (410,000) numbered about the same as just before the war's end.

The small decline in employment during the month represented the net effect of divergent movements in agricultural and nonagricultural employment. A seasonal decline of 220,000 in farm employment was largely offset by a gain of 210,000 in nonfarm employment.

The increase in nonagricultural employment between September and October of this year maintained an unbroken record of monthly

increases since September 1945. Veterans and women accounted for the greater part of the gain during the month. The September to October increase among ex-servicemen, however, was the smallest monthly gain since the war's end, as demobilization tapered off and some veterans left the labor market to go to school. A gain of 90,000 among women continued the series of moderate advances recorded since June of 1946. Entries of women in response to pressures of rising living costs and high labor demand have been more than offsetting withdrawals accompanying high marriage and birth rates.

*Total Labor Force in the United States, Classified by Employment Status, Hours Worked, and Sex, September and October 1946 and October 1945*

[Source: U. S. Department of Commerce, Bureau of the Census]

Item	Estimated number (in thousands) of persons 14 years of age and over <sup>1</sup>								
	Total, both sexes			Male			Female		
	Sept. 1946	Oct. 1946	Oct. 1945	Sept. 1946	Oct. 1946	Oct. 1945	Sept. 1946	Oct. 1946	Oct. 1945
Total labor force <sup>2</sup> .....	61,660	61,480	63,750	44,360	44,290	44,990	17,300	17,190	18,760
Civilian labor force.....	59,440	59,310	53,110	42,170	42,140	34,590	17,270	17,170	18,520
Unemployment.....	2,070	1,950	1,550	1,580	1,540	930	490	410	620
Employment.....	57,370	57,360	51,560	40,590	40,600	33,660	16,780	16,760	17,900
Nonagricultural.....	48,630	48,840	42,770	33,810	33,930	27,060	14,820	14,910	15,710
Worked 35 hours or more.....	41,960	41,870	35,180	30,290	30,220	23,320	11,670	11,650	11,860
Worked 15-34 hours.....	3,640	4,320	4,740	1,760	2,180	2,140	1,880	2,140	2,600
Worked 1-14 hours <sup>3</sup> .....	1,130	1,240	1,130	440	540	440	690	700	690
With a job but not at work <sup>4</sup> .....	1,900	1,410	1,720	1,320	990	1,160	580	420	560
Agricultural.....	8,740	8,520	8,790	6,780	6,670	6,600	1,960	1,850	2,190
Worked 35 hours or more.....	7,120	6,740	6,820	6,030	5,730	5,610	1,090	1,010	1,210
Worked 15-34 hours.....	1,330	1,490	1,660	540	750	770	790	740	890
Worked 1-14 hours <sup>3</sup> .....	170	180	190	100	100	110	(*)	(*)	(*)
With a job but not at work <sup>4</sup> .....	120	110	120	110	(*)	110	(*)	(*)	(*)

<sup>1</sup> Estimates are subject to sampling variation, which may be large in cases where the quantities shown are relatively small. Therefore, the smaller estimates should be used with caution; those under 100,000 are not presented in the table but are replaced with an asterisk (\*). All data exclude persons in institutions.

<sup>2</sup> Total labor force consists of the civilian labor force and the armed forces. Estimates of the armed forces during the census week are projected from data on net strength as of the first of the month.

<sup>3</sup> Excludes persons engaged only in incidental unpaid family work (less than 15 hours); these persons are classified as not in the labor force.

<sup>4</sup> Includes persons who had a job or business, but who did not work during the census week because of illness, bad weather, vacation, labor dispute, or because of temporary lay-off with definite instructions to return to work within 30 days of lay-off. Does not include unpaid family workers.

## Summary of Employment Reports for October 1946

DURING October 1946 employment in trade rose seasonally by 116,000 and in government declined by almost 100,000, while nonfarm employment increased by 121,000. The drop of about 19,000 in contract construction was offset by a rise of more than that number in manufacturing.



The number of employees in nonagricultural establishments showed an increase of 121,000 between September and October 1946. Unemployment, according to the Bureau of the Census, remained at the 2 million level.

The current seasonal gain in trade raised the number of workers in this industry division to more than 8 million, the highest since December 1941. After VJ-day, there was a net rise of more than a million in trade employment.

Of the increase of about 30,000 workers in manufacturing between September and October, only 5000 were production workers. The heavy goods industries showed a gain in production-worker employment of 29,000, while employment in the light industries dropped by 24,000.

### *Industrial and Business Employment*

The most sizable manufacturing employment change between September and October was the seasonal decline of 83,000 production workers in the food group. Almost all of this drop was in the canning industry.

Significant gains were reported by the electrical machinery and other machinery groups among the heavy industries and by textiles and apparel in the light industry group.

In the year ending October 1946, more than 1½ million production workers were added to manufacturing industries. Of the 20 major groups, only transportation equipment and food failed to show an increase. The largest single increase was in the automobile industry, where employment rose by 309,000.

TABLE 1.—*Estimated Number of Employees in Nonagricultural Establishments, by Industry Division*

Industry division	Estimated number of employees, (in thousands)			
	October 1946	Septem- ber 1946	August 1946	October 1945
Total estimated employment <sup>1</sup> .....	40, 250	40, 129	39, 371	36, 327
Manufacturing <sup>2</sup> .....	14, 761	24, 731	14, 583	13, 048
Mining .....	825	827	828	718
Contract construction and Federal force-account construction ..	2, 084	2, 103	2, 091	1, 006
Transportation and public utilities .....	3, 988	3, 948	4, 001	3, 825
Trade .....	8, 034	7, 918	7, 814	7, 331
Finance, service, and miscellaneous .....	5, 208	5, 155	5, 160	4, 698
Federal, State, and local government, excluding Federal force- account construction .....	5, 350	5, 447	5, 394	5, 701

<sup>1</sup> Estimates include all full- and part-time wage and salary workers in nonagricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded.

<sup>2</sup> Estimates for manufacturing have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency and are comparable with the production-worker estimates shown in table 2.

TABLE 2.—*Estimated Number of Production Workers and Indexes of Production-Worker Employment in Manufacturing Industries, by Major Industry Group*<sup>1</sup>

Group	Estimated number of production workers (in thousands)		Production-worker indexes (1939=100)	
	October 1946	October 1945	October 1946	October 1945
All manufacturing.....	12,021	10,450	146.7	127.6
Durable goods.....	6,118	5,151	169.4	142.6
Nondurable goods.....	5,903	5,299	128.9	115.7
Iron and steel and their products.....	1,442	1,241	145.5	125.2
Electrical machinery.....	559	467	215.9	180.1
Machinery, except electrical.....	1,091	909	206.5	172.1
Transportation equipment, except automobiles.....	442	667	278.7	420.4
Automobiles.....	745	460	185.1	114.4
Nonferrous metals and their products.....	402	305	175.4	133.0
Lumber and timber basic products.....	633	476	150.7	113.3
Furniture and finished lumber products.....	393	307	119.8	93.7
Stone, clay, and glass products.....	411	319	139.9	108.8
Textile-mill products and other fiber manufactures.....	1,224	1,057	107.0	92.4
Apparel and other finished textile products.....	1,085	928	137.4	117.5
Leather and leather products.....	352	313	101.5	90.3
Food.....	1,074	1,116	125.7	130.6
Tobacco manufactures.....	89	86	95.8	92.2
Paper and allied products.....	372	321	140.2	120.9
Printing, publishing, and allied industries.....	394	336	120.1	102.5
Chemicals and allied products.....	491	496	170.5	168.5
Products of petroleum and coal.....	151	131	142.8	123.6
Rubber products.....	235	187	194.0	154.4
Miscellaneous industries.....	436	338	178.2	138.3

<sup>1</sup> The estimates and indexes presented in this table have been adjusted to levels indicated by the final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency.

### Public Employment

*Civilian.*—Employment in the executive branch of the Federal Government within continental United States on October 1 was 78,000 lower than the previous month. War agencies as a whole dropped 81,000 persons, but the War and Navy Departments alone dropped 86,000. The difference was made up by a gain in War Assets Administration personnel, which was the only war agency showing an uptrend, except the Maritime Commission which absorbed the personnel of the abolished War Shipping Administration.

Although the Agriculture Department showed a seasonal employment drop of 6,000 and several other agencies whittled down their staffs, an increase of 11,000 in the Veterans' Administration pushed the peacetime agencies total up by 3,000.

In the Washington, D. C., area, however, war and peacetime agencies alike were affected by cut-backs, amounting to an over-all figure of 7,000, though the war agencies were affected to a greater extent than the peacetime agencies.

Within continental United States, employment in the executive branch totaled 2,100,000, of which 1,000,000 or 47 percent was in war agencies. Employment in the Washington area amounted to 226,000, with 81,000 or a little over a third in war agencies.

TABLE 3.—*Employment and Pay Rolls of Regular Federal Services and of Government Corporations in Selected Months*

Year and month	Total	Executive <sup>1</sup>			Legislative	Judicial	Government corporations <sup>2</sup>
		All areas	Continental United States				
			Total	Washington, D. C., area			
Employment <sup>3</sup>							
October 1939.....	992,324	958,920	916,805	126,355	5,551	2,282	25,571
October 1940.....	1,127,921	1,093,078	1,025,945	146,059	5,938	2,518	26,387
October 1941.....	1,588,997	1,549,670	1,433,694	192,742	6,279	2,571	30,477
October 1942.....	2,671,692	2,629,189	2,406,497	282,629	6,314	2,664	33,525
October 1943.....	3,223,035	3,178,075	2,823,745	267,545	6,135	2,651	36,174
October 1944.....	3,369,288	3,324,693	2,881,171	259,060	6,240	2,633	35,722
October 1945.....	3,495,546	3,451,871	2,581,276	239,992	6,388	2,878	34,409
July 1946.....	2,725,779	2,682,586	2,266,850	235,112	6,697	3,063	33,433
August 1946 <sup>4</sup> .....	2,661,749	2,618,630	2,250,166	234,758	6,736	3,036	33,347
September 1946 <sup>4</sup> .....	2,554,824	2,511,979	2,200,271	232,602	6,825	3,075	32,945
October 1946.....	2,471,435	2,428,901	2,121,526	225,862	6,902	3,058	32,574
Pay rolls (in thousands) <sup>5</sup>							
October 1943.....	\$672,738	\$664,958	\$607,968	\$54,883	\$1,495	\$768	\$5,517
October 1944.....	684,763	677,023	626,305	54,628	1,529	789	5,422
October 1945 <sup>6</sup> .....	587,175	579,053	519,594	52,033	1,749	940	5,433
July 1946 <sup>6</sup> .....	534,406	525,674	486,965	57,280	2,093	945	5,694
August 1946 <sup>6</sup> .....	547,947	539,142	503,903	56,090	2,106	1,009	5,690
September 1946 <sup>6</sup> .....	537,114	528,256	492,955	54,594	2,112	1,136	5,610
October 1946 <sup>6</sup> .....	529,328	520,297	481,498	54,220	2,112	1,104	5,815

<sup>1</sup> Includes employees on force-account construction who are also included under construction projects (p. 1014). Beginning July 1945, data include clerks at third-class post offices who were previously working on a contract basis. Data exclude substitute rural mail carriers.

<sup>2</sup> Data are for employees of the Panama Railroad Company, the Federal Reserve banks, and banks of the Farm Credit Administration. Data for other Government corporations are included under the executive service.

<sup>3</sup> Employment is as of the first of the calendar month.

<sup>4</sup> Revised.

<sup>5</sup> Data are for all pay periods ending within the calendar month. Beginning July 1945, this represents pay for 4 weeks for most employees.

<sup>6</sup> Subject to revision.

**Military.**—With enlisted personnel entitled for the first time to retention on the pay roll after separation from active duty until the expiration of all accrued and unused leave, total military strength showed only a slight decline, 7,000, during the month of September 1946. This contrasts with a decline of 300,000 in the preceding month and of 400,000 to 2,000,000 a month in the 11 months of heaviest demobilization immediately following the close of the war.

In accordance with the same law as that providing the above leave arrangements for enlisted men (Public, No. 704, 79th Cong.), enlisted personnel who were separated from military duty prior to September received payment for similar accrued and unused leave amounting to \$120,000,000 in October—\$112,000,000 in the form of bonds and \$8,000,000 in cash. In addition, officers and enlisted personnel who were still on active duty received \$9,000,000 in October for leave



accrued in excess of 60 days (\$7,000,000 in bonds and \$2,000,000 in cash), also authorized by Public Law No. 704. In September, when procedures for making payments were still in the process of being evolved, both types of leave payments amounted to only \$2,000,000; three-fourths of this was for leave of present personnel accrued in excess of 60 days and almost all of it was in cash.

The cost of the leave-payment program is not entirely reflected in these figures, however, as the pay of present enlisted personnel while on terminal leave is included in the regular pay roll. The part of the program for which figures are separable may be expected to be of short duration as the claims of former enlisted men dwindle in volume with the lapse of time after passage of the act and with the gradual payment of excess leave.

TABLE 4.—*Employment and Pay Rolls of the Executive Branch of the Federal Government in Selected Months*<sup>1</sup>

Year and month	All agencies	War agencies <sup>2</sup>			Other agencies <sup>3</sup>		
		Total	Conti- nental United States	Outside conti- nental United States <sup>4</sup>	Total	Conti- nental United States	Outside conti- nental United States <sup>4</sup>
Employment <sup>5</sup>							
October 1939.....	958,920	229,917	197,955	31,962	729,003	718,850	10,153
October 1940.....	1,093,078	328,860	273,835	55,025	764,218	752,110	12,108
October 1941.....	1,549,670	725,413	622,988	102,425	824,257	810,706	13,551
October 1942.....	2,629,189	1,774,994	1,566,801	208,193	854,195	839,696	14,499
October 1943.....	3,178,075	2,360,974	2,024,409	336,565	817,101	799,336	17,765
October 1944.....	3,324,693	2,480,712	2,053,014	427,698	843,981	828,157	15,824
October 1945.....	3,451,871	2,494,739	1,648,236	846,503	957,132	933,040	24,092
July 1946.....	2,682,586	1,547,893	1,159,084	388,809	1,134,693	1,107,766	26,927
August 1946 <sup>6</sup> .....	2,618,630	1,470,579	1,129,390	341,189	1,148,051	1,120,776	27,275
September 1946 <sup>6</sup> .....	2,511,979	1,358,426	1,074,344	284,082	1,153,553	1,125,927	27,626
October 1946.....	2,428,901	1,271,976	992,574	279,402	1,156,925	1,128,952	27,973
Pay rolls (in thousands) <sup>7</sup>							
October 1943.....	\$664,958	\$501,927	\$448,562	\$53,365	\$163,031	\$159,406	\$3,625
October 1944.....	677,023	506,923	459,628	47,295	170,100	166,677	3,423
October 1945 <sup>8</sup> .....	579,053	385,094	330,442	54,652	193,959	189,152	4,807
July 1946 <sup>9</sup> .....	525,674	277,907	245,220	32,687	247,767	241,745	6,022
August 1946 <sup>9</sup> .....	539,142	286,911	257,355	29,556	252,231	246,548	5,683
September 1946 <sup>9</sup> .....	528,256	275,147	245,604	29,543	253,109	247,351	5,758
October 1946 <sup>9</sup> .....	520,297	261,999	229,013	32,986	258,298	252,485	5,813

<sup>1</sup> Includes employees on force-account construction who are also included under construction projects (p. 1014).

<sup>2</sup> Covers War and Navy Departments, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and the emergency war agencies.

<sup>3</sup> Beginning July 1945, data include clerks at third-class post offices who previously were working on a contract basis. Data exclude substitute rural mail carriers.

<sup>4</sup> Includes Alaska and the Panama Canal Zone.

<sup>5</sup> Employment is as of the first of the calendar month.

<sup>6</sup> Revised.

<sup>7</sup> Data are for all pay periods ending within the calendar month. Beginning July 1945, this represents pay for 4 weeks for most employees.

<sup>8</sup> Subject to revision.

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TABLE 3

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*Sources of data.*—Data for the Federal executive service are reported through the Civil Service Commission, whereas data for the legislative and judicial services and Government corporations are reported to the Bureau of Labor Statistics. Employment on Federal force-account construction is included in both the executive branch (tables 3 and 4) and in construction employment (table 2, p. 1014).

Military personnel and pay figures are reported monthly to the Bureau of Labor Statistics but are published here only quarterly.

Mimeographed tables giving civilian employment and military personnel and pay monthly, 1939 to date, and civilian pay rolls monthly, 1943 to date, are available upon request.

TABLE 5.—*Personnel and Pay of the Military Branch of the Federal Government in Selected Months*

[In thousands]

Branch, sex, or type of pay	October 1946 <sup>1</sup>	September 1946 <sup>1</sup>	August 1946 <sup>1</sup>	October 1945	October 1941
Personnel, total <sup>2</sup> .....	2,468	2,476	2,744	11,519	2,006
Army.....	1,737	1,731	1,816	7,564	1,601
Navy <sup>3</sup> .....	731	745	928	3,955	405
Men.....	2,435	2,440	2,696	11,261	1,998
Women.....	33	36	48	258	8
Pay, total.....	\$609,669	\$475,227	\$541,049	\$1,859,636	\$138,029
Army.....	371,766	304,352	311,584	1,179,249	99,805
Navy <sup>3</sup> .....	237,903	170,875	229,465	680,387	38,224
Pay rolls <sup>4</sup> .....	388,255	384,052	413,956	1,323,369	138,029
Mustering-out pay <sup>5</sup> .....	56,665	51,139	86,111	284,476	-----
Family allowances <sup>6</sup> .....	35,653	38,029	40,964	251,791	-----
Leave payments <sup>7</sup> .....	129,096	2,007	18	-----	-----
Cash.....	10,086	1,984	18	-----	-----
Bonds.....	119,010	23	-----	-----	-----

<sup>1</sup> Preliminary.

<sup>2</sup> Personnel is as of the first of the calendar month and includes those on terminal leave.

<sup>3</sup> Data for the Navy cover the Navy, Marine Corps, and Coast Guard. The missing and those in the hands of the enemy are included.

<sup>4</sup> Pay rolls are computed from personnel records. The personnel used in the computations is the count as of the last day of the month for the Army and the average for the month for the Navy. Pay rolls for the Navy (proper) in October include quarterly clothing allowances; in October 1946 these allowances amounted to \$4,616,000.

<sup>5</sup> Although payments may extend over a period of 3 months, data for the Navy (proper) include the total amount in the month of discharge.

<sup>6</sup> Represents Government's contribution. The men's share is included in the pay roll.

<sup>7</sup> Leave payments were authorized by Pub. No. 704, 79th Cong., to former enlisted personnel for accrued and unused leave and to present officers and enlisted personnel for leave accrued in excess of 60 days. Payment of present enlisted personnel while on terminal leave is included in the pay roll. Value of the bonds represents the face value; interest will be paid in addition to the face value at the time the bonds are cashed.



## Detailed Reports for Industrial and Business Employment, September 1946

MONTHLY reports on employment and pay rolls are presented below for more than 150 manufacturing industries and for 27 non-manufacturing industries including water transportation and class I steam railroads. Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and amount of pay rolls for the period ending nearest the 15th of the month.

TABLE 1.—Estimated Number of Production Workers in Manufacturing Industries<sup>1</sup>

[In thousands]

Industry group and industry	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
All manufacturing.....	12,019	11,881	11,554	10,529
Durable goods.....	6,091	5,999	5,829	5,234
Nondurable goods.....	5,928	5,882	5,725	5,295
<i>Durable goods</i>				
Iron and steel and their products.....	1,456	1,433	1,390	1,240
Blast furnaces, steel works, and rolling mills.....	480.1	480.0	469.5	422.4
Gray-iron and semisteel castings.....	82.1	81.6	80.7	66.1
Malleable-iron castings.....	24.4	24.1	23.6	22.0
Steel castings.....	50.7	50.2	50.2	53.4
Cast-iron pipe and fittings.....	18.8	16.9	18.3	13.2
Tin cans and other tinware.....	44.8	44.4	43.4	37.4
Wire drawn from purchased rods.....	29.8	29.1	28.7	27.5
Wirework.....	41.4	39.5	36.5	28.0
Cutlery and edge tools.....	25.9	25.7	25.4	21.0
Tools (except edge tools, machine tools, files, and saws).....	26.4	25.6	24.3	22.7
Hardware.....	47.7	45.9	44.8	33.9
Plumbers' supplies.....	28.1	27.1	25.8	17.5
Stoves, oil burners, and heating equipment not elsewhere classified.....	59.4	56.8	54.0	43.8
Steam and hot-water heating apparatus and steam fittings.....	48.9	48.0	47.7	40.4
Stamped and enameled ware and galvanizing.....	82.0	79.0	75.4	59.8
Fabricated structural and ornamental metalwork.....	55.6	55.5	53.2	41.0
Metal doors, sash, frames, molding, and trim <sup>2</sup> .....	10.2	9.8	8.8	7.0
Bolts, nuts, washers, and rivets.....	20.4	18.7	17.6	19.5
Forgings, iron and steel.....	26.2	26.3	25.5	25.1
Wrought pipe, welded and heavy-riveted <sup>3</sup> .....	13.4	12.8	11.5	12.3
Screw-machine products and wood screws.....	28.6	27.8	26.8	25.1
Steel barrels, kegs, and drums.....	6.2	6.4	5.8	6.0
Firearms.....	14.2	14.0	13.3	10.6
Electrical machinery.....	542	524	507	445
Electrical equipment.....	300.1	290.7	282.5	271.0
Radios and phonographs.....	84.9	82.3	76.7	57.4
Communication equipment.....	89.0	85.3	85.4	65.7
Machinery, except electrical.....	1,070	1,051	1,027	913
Machinery and machine-shop products.....	363.2	356.6	351.5	332.9
Engines and turbines.....	45.3	44.9	43.5	44.7
Tractors.....	52.0	52.8	52.4	48.8
Agricultural machinery, excluding tractors.....	41.2	40.7	40.8	36.0
Machine tools.....	62.0	61.3	59.2	59.7
Machine-tool accessories.....	51.5	50.2	48.7	47.4
Textile machinery.....	33.4	32.7	31.7	24.9
Pumps and pumping equipment.....	57.5	56.9	54.6	52.5
Typewriters.....	20.5	19.4	18.2	11.5
Cash registers, adding and calculating machines.....	34.7	33.2	33.5	25.2
Washing machines, wringers and driers, domestic.....	11.9	11.5	10.3	6.5
Sewing machines, domestic and industrial.....	10.1	9.7	9.8	7.4
Refrigerators and refrigeration equipment.....	61.4	60.5	59.2	32.1
Transportation equipment, except automobiles.....	444	451	459	788
Locomotives.....	27.1	26.8	26.2	29.7
Cars, electric- and steam-railroad.....	48.1	46.6	45.5	40.5
Aircraft and parts, excluding aircraft engines.....	139.5	134.2	128.6	156.5
Aircraft engines.....	27.9	27.5	29.5	33.1
Shipbuilding and boatbuilding.....	143.4	157.8	173.9	445.4
Motorcycles, bicycles, and parts.....	11.2	10.7	10.4	6.2
Automobiles.....	764	731	699	426
Nonferrous metals and their products.....	396	392	378	301
Smelting and refining, primary, of nonferrous metals.....	37.4	36.9	35.4	36.0
Alloying and rolling and drawing of nonferrous metals except aluminum.....	61.5	61.2	59.5	51.6
Clocks and watches.....	27.8	27.5	26.1	19.6
Jewelry (precious metals) and jewelers' findings.....	17.9	17.4	16.7	13.5
Silverware and plated ware.....	14.6	14.2	13.7	9.7
Lighting equipment.....	30.4	29.9	29.1	16.8
Aluminum manufactures.....	49.7	49.4	48.6	35.9
Sheet-metal work, not elsewhere classified.....	26.4	26.5	25.0	21.1
Lumber and timber basic products.....	624	625	603	508
Sawmills and logging camps.....	231.9	235.4	229.0	207.7
Planing and plywood mills.....	74.3	73.4	70.7	63.1

See footnotes at end of table.

TABLE 1.—

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TABLE 1.—Estimated Number of Production Workers in Manufacturing Industries<sup>1</sup>—Continued

[In thousands]

Industry group and industry	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
<i>Durable goods—Continued</i>				
Furniture and finished lumber products.....	388	388	376	303
Mattresses and bedsprings.....	22.7	21.9	20.7	14.7
Furniture.....	164.4	165.3	160.9	128.4
Wooden boxes, other than cigar.....	25.1	25.3	24.7	23.2
Caskets and other morticians' goods.....	13.2	13.1	13.1	11.3
Wood preserving.....	12.6	12.5	12.2	10.3
Wood, turned and shaped.....	22.6	22.7	22.0	19.5
Stone, clay, and glass products.....	407	404	390	310
Glass and glassware.....	104.3	103.7	100.1	84.5
Glass products made from purchased glass.....	12.0	12.0	11.5	9.8
Cement.....	28.9	29.1	28.2	19.4
Brick, tile, and terra cotta.....	63.4	63.4	62.4	42.7
Pottery and related products.....	48.0	47.2	45.6	37.4
Gypsum.....	5.9	5.8	5.5	4.1
Wallboard, plaster (except gypsum), and mineral wool.....	10.8	10.9	8.8	9.0
Lime.....	8.9	8.9	8.8	7.4
Marble, granite, slate, and other products.....	17.4	17.3	16.9	11.9
Abrasives.....	19.3	19.0	18.8	17.1
Asbestos products.....	20.5	20.0	19.1	17.5
<i>Nondurable goods</i>				
Textile-mill products and other fiber manufactures.....	1,212	1,197	1,183	1,051
Cotton manufactures, except smallwares.....	455.8	452.3	445.0	407.0
Cotton smallwares.....	14.3	14.1	13.7	12.4
Silk and rayon goods.....	93.0	92.6	90.9	84.9
Woolen and worsted manufactures, except dyeing and finishing.....	159.7	155.8	155.0	136.3
Hosiery.....	113.8	114.1	113.3	96.2
Knitted cloth.....	11.1	11.2	11.1	9.6
Knitted outerwear and knitted gloves.....	30.4	29.7	30.0	26.3
Knitted underwear.....	34.9	35.2	34.9	32.5
Dyeing and finishing textiles, including woolen and worsted.....	64.1	63.8	63.0	55.9
Carpets and rugs, wool.....	24.6	24.2	23.7	17.8
Hats, fur-felt.....	11.3	9.0	10.7	9.3
Jute goods, except felts.....	3.8	3.7	3.8	3.4
Cordage and twine.....	15.2	14.9	14.4	13.8
Apparel and other finished textile products.....	1,068	1,049	1,001	911
Men's clothing, not elsewhere classified.....	197.1	197.3	191.8	180.5
Shirts, collars, and nightwear.....	54.4	54.5	53.8	48.5
Underwear and neckwear, men's.....	12.4	11.9	11.3	11.3
Work shirts.....	13.5	13.3	13.3	13.1
Women's clothing, not elsewhere classified.....	216.5	211.5	195.7	202.1
Corsets and allied garments.....	16.0	15.9	15.6	14.1
Millinery.....	19.3	18.7	17.1	18.1
Handkerchiefs.....	2.3	2.3	2.2	2.6
Curtains, draperies, and bedspreads <sup>2</sup> .....	14.0	13.9	14.0	9.8
Housefurnishing, other than curtains, etc.....	11.0	11.1	10.6	8.1
Textile bags.....	13.5	13.6	14.6	14.4
Leather and leather products.....	355	354	355	305
Leather.....	42.1	41.9	41.6	38.8
Boot and shoe cut stock and findings.....	17.7	18.2	17.7	16.3
Boots and shoes.....	192.7	191.4	193.3	164.6
Leather gloves and mittens.....	11.0	11.1	11.3	10.9
Trunks and suitcases.....	14.6	14.8	14.4	10.9
Food.....	1,157	1,166	1,102	1,183
Slaughtering and meat packing.....	94.8	138.4	123.4	126.5
Butter.....	25.2	26.1	26.4	23.7
Condensed and evaporated milk.....	14.2	15.0	15.7	14.9
Ice cream.....	18.9	20.2	20.9	16.6
Flour.....	29.7	29.5	28.3	30.8
Feeds, prepared.....	21.0	22.4	21.7	23.0
Cereal preparations.....	10.9	10.1	9.5	9.5
Baking.....	241.4	236.9	234.0	251.0
Sugar refining, cane.....	12.7	14.0	14.2	13.1
Sugar, beet.....	7.9	6.8	4.5	7.6
Confectionery.....	52.1	48.6	46.0	50.7
Beverages, nonalcoholic.....	24.1	25.6	25.7	25.7
Malt liquors.....	54.2	52.4	52.0	55.2
Canning and preserving.....	243.9	206.5	183.9	237.1

See footnotes at end of table.

TABLE 1.—*Estimated Number of Production Workers in Manufacturing Industries*<sup>1</sup>—Continued

[In thousands]

Industry group and industry	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
<i>Nondurable goods—Continued</i>				
Tobacco manufactures.....	87	86	85	83
Cigarettes.....	33.6	33.3	33.6	34.9
Cigars.....	40.0	38.7	37.6	34.3
Tobacco (chewing and smoking) and snuff.....	7.6	7.7	7.6	8.7
Paper and allied products.....	368	366	361	312
Paper and pulp.....	167.7	167.8	166.2	142.0
Paper goods, other.....	46.6	46.2	45.5	41.9
Envelopes.....	10.4	10.3	10.2	9.5
Paper bags.....	14.7	14.0	14.1	12.2
Paper boxes.....	87.4	87.2	85.6	76.8
Printing, publishing, and allied industries.....	387	385	383	324
Newspapers and periodicals.....	131.8	131.1	130.1	112.5
Printing, book and job.....	159.8	158.7	159.5	133.1
Lithographing.....	29.5	29.1	28.8	24.2
Bookbinding.....	31.9	32.1	31.2	26.3
Chemicals and allied products.....	484	475	472	496
Paints, varnishes, and colors.....	36.0	35.9	35.6	29.7
Drugs, medicines, and insecticides.....	52.2	51.8	51.4	46.9
Perfumes and cosmetics.....	12.2	12.6	12.6	12.4
Soap.....	14.2	14.1	14.0	13.2
Rayon and allied products.....	57.4	57.3	57.0	54.0
Chemicals, not elsewhere classified.....	116.6	117.2	117.2	111.7
Explosives and safety fuses.....	12.8	12.6	12.3	39.2
Compressed and liquefied gases.....	5.7	5.9	5.8	5.6
Ammunition, small-arms.....	7.4	4.9	7.6	13.5
Fireworks.....	3.2	2.9	2.8	3.3
Cottonseed oil.....	13.4	10.9	8.4	14.7
Fertilizers.....	22.3	20.9	19.3	20.9
Products of petroleum and coal.....	152	152	151	131
Petroleum refining.....	99.8	100.1	100.1	87.7
Coke and byproducts.....	25.9	25.9	25.6	22.1
Paving materials.....	2.4	2.3	2.1	1.7
Roofing materials.....	12.6	12.2	12.0	9.8
Rubber products.....	230	227	218	165
Rubber tires and inner tubes.....	104.0	102.8	99.1	71.8
Rubber boots and shoes.....	17.9	18.0	17.5	14.7
Rubber goods, other.....	73.3	72.1	69.3	57.7
Miscellaneous industries.....	428	425	414	334
Instruments (professional and scientific), and fire control equipment.....	20.9	21.2	21.2	26.2
Photographic apparatus.....	25.5	25.6	25.2	20.9
Optical instruments and ophthalmic goods.....	21.2	21.2	21.1	18.8
Pianos, organs, and parts.....	9.4	9.4	9.1	5.2
Games, toys, and dolls.....	23.5	22.8	20.8	12.8
Buttons.....	10.6	10.6	10.1	8.8
Fire extinguishers.....	2.1	2.1	2.0	2.5

<sup>1</sup> September 1946 estimates are based on reports from 33,200 cooperating establishments covering 7,268,000 production workers. Estimates for the major industry groups have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency. Estimates for individual industries have been adjusted to levels indicated by the 1939 Census of Manufactures but not to Federal Security Agency data. For this reason, together with the fact that this Bureau has not prepared estimates for certain industries, the sum of the individual industry estimates will not agree with the totals shown for the major industry groups.

<sup>2</sup> Revisions have been made as follows in the data for earlier months:

*Metal doors, sash, frames, molding, and trim.*—January 1946 to 7.4; March to 7.2; May and June to 7.3 and 7.7.

*Wrought pipe, welded and heavy-riveted.*—June 1946 to 11.2.

*Curtains, draperies, and bedspreads.*—January through June 1946 to 11.8, 12.4, 12.5, 12.6, 13.0, and 13.8.

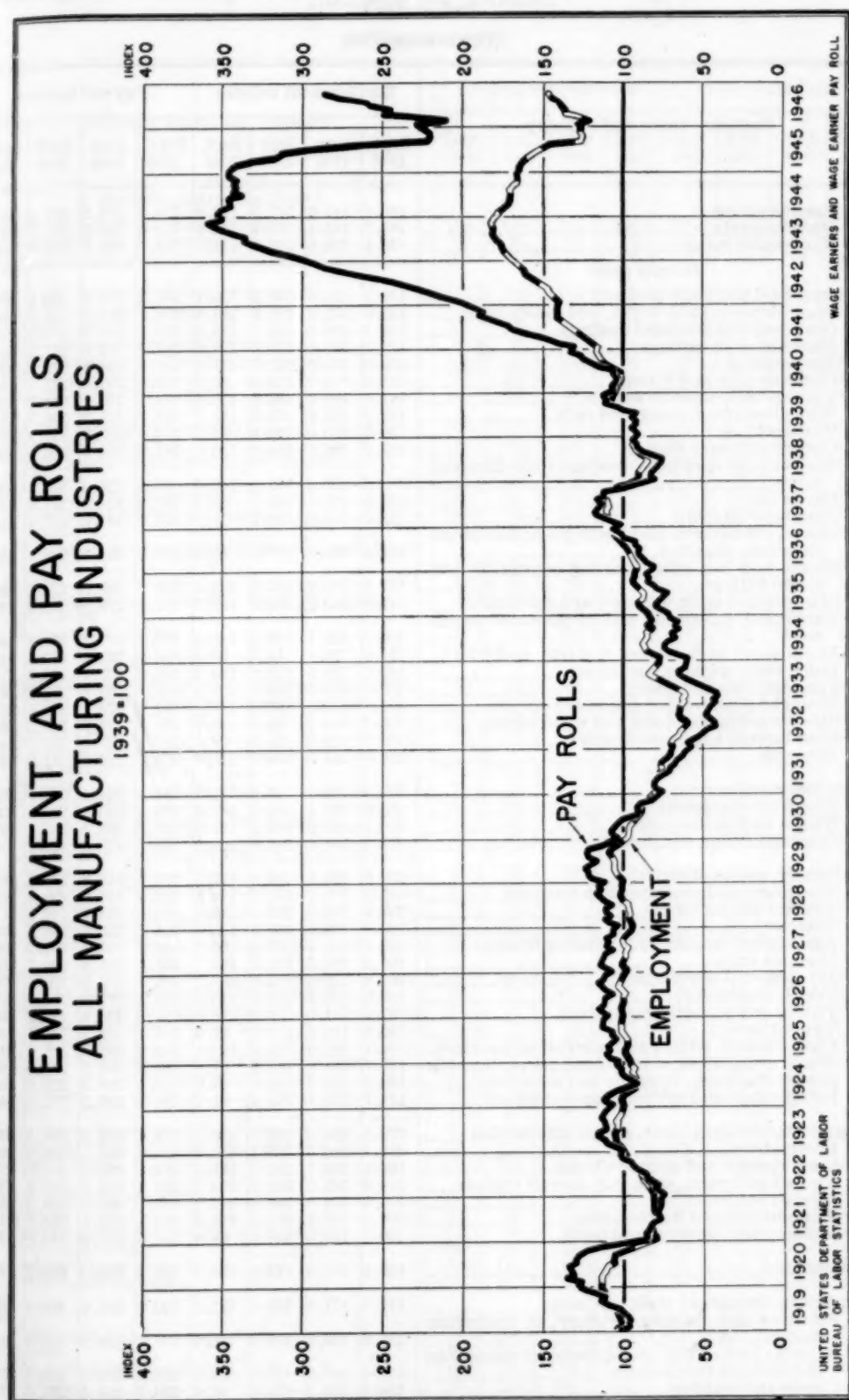




TABLE 2.—Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries<sup>1</sup>

[1939 average = 100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Sept. 1946	Aug. 1946	July 1946	Sept. 1945	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
All manufacturing.....	146.7	145.0	141.0	128.5	284.3	278.2	261.2	224.2
Durable goods.....	168.7	166.1	161.4	144.9	314.6	306.9	287.7	246.2
Nondurable goods.....	129.4	128.4	125.0	115.6	254.7	250.2	235.4	202.6
<i>Durable goods</i>								
Iron and steel and their products.....	146.9	144.5	140.2	125.1	263.2	255.8	238.1	206.9
Blast furnaces, steel works, and rolling mills.....	123.6	123.6	120.9	108.8	206.3	204.0	191.8	175.3
Gray-iron and semisteel castings.....	140.5	139.6	138.1	113.2	291.7	280.5	264.0	214.8
Malleable-iron castings.....	135.1	133.6	131.0	121.8	287.5	282.6	267.1	228.4
Steel castings.....	168.5	166.9	167.0	177.6	297.5	294.8	277.1	280.9
Cast-iron pipe and fittings.....	113.6	102.2	110.5	80.0	240.4	208.6	221.7	151.2
Tin cans and other tinware.....	141.1	139.9	136.6	118.4	274.1	270.1	248.7	200.7
Wire drawn from purchased rods.....	135.7	132.3	130.5	125.1	231.8	219.2	206.3	179.4
Wirework.....	136.3	130.0	120.2	85.7	272.5	257.3	237.2	157.6
Cutlery and edge tools.....	167.7	166.5	164.8	136.5	364.6	354.9	340.4	265.0
Tools (except edge tools, machine tools, files, and saws).....	172.2	167.2	158.6	148.3	340.8	326.2	303.6	256.7
Hardware.....	133.8	128.7	125.7	95.0	267.2	254.3	244.9	173.9
Plumbers' supplies.....	113.9	110.0	104.8	71.2	196.7	191.0	175.4	114.2
Stoves, oil burners, and heating equipment not elsewhere classified.....	128.8	123.0	117.0	95.1	247.5	234.3	210.7	160.5
Steam and hot-water heating apparatus and steam fittings.....	161.3	158.2	157.3	133.4	306.7	280.6	279.7	234.0
Stamped and enameled ware and galvanizing.....	147.6	142.2	135.8	107.7	291.0	279.9	253.5	190.1
Fabricated structural and ornamental metal-work.....	156.7	156.1	149.8	115.5	273.9	271.7	250.8	180.8
Metal doors, sash, frames, molding, and trim.....	131.9	126.7	114.1	90.1	248.9	233.4	207.4	148.1
Bolts, nuts, washers, and rivets.....	142.5	130.6	122.9	136.1	245.0	227.7	190.5	217.1
Forgings, iron and steel.....	170.1	170.9	165.9	163.5	301.1	303.8	272.1	258.5
Wrought pipe, welded and heavy-riveted.....	159.7	153.4	137.0	147.1	281.3	270.7	218.6	237.3
Screw-machine products and wood screws.....	168.7	164.1	158.5	148.6	334.0	324.9	300.5	280.2
Steel barrels, kegs, and drums.....	102.7	106.0	95.6	98.5	214.5	227.4	187.2	164.5
Firearms.....	284.1	281.0	266.9	213.0	573.2	530.8	515.9	380.0
Electrical machinery.....	209.3	202.1	195.8	171.5	384.5	364.4	338.3	268.5
Electrical equipment.....	166.0	160.8	156.3	149.9	299.5	285.0	264.3	229.7
Radios and phonographs.....	195.1	189.0	176.2	131.8	391.8	368.3	332.1	227.6
Communication equipment.....	277.2	265.6	265.9	204.6	505.1	478.8	459.2	313.9
Machinery, except electrical.....	202.5	199.0	194.4	172.7	362.2	348.8	333.5	285.7
Machinery and machine-shop products.....	179.5	176.2	173.7	164.6	322.9	314.2	299.4	266.4
Engines and turbines.....	242.6	240.9	233.1	239.6	484.5	453.7	446.8	368.6
Tractors.....	166.4	168.7	167.5	155.9	254.1	256.5	248.4	237.5
Agricultural machinery, excluding tractors.....	148.1	146.4	146.8	129.3	269.8	256.7	251.2	246.8
Machine tools.....	169.2	167.5	161.5	163.1	285.5	281.4	262.3	260.5
Machine-tool accessories.....	204.8	199.5	193.5	188.2	336.0	316.3	293.2	279.6
Textile machinery.....	152.3	149.2	144.7	113.6	290.5	277.9	265.3	209.8
Pumps and pumping equipment.....	237.1	234.6	225.2	216.6	444.0	438.4	413.2	389.9
Typewriters.....	126.6	119.5	112.2	71.2	248.1	228.2	216.5	133.1
Cash registers, adding and calculating machines.....	176.1	168.9	170.0	128.1	333.2	292.8	314.2	210.4
Washing machines, wringers and driers, domestic.....	158.7	153.8	137.8	87.4	287.9	269.5	234.6	143.2
Sewing machines, domestic and industrial.....	128.3	123.2	124.8	94.6	243.1	238.9	229.6	192.8
Refrigerators and refrigeration equipment.....	174.7	172.1	168.4	91.2	298.2	288.2	272.2	146.7
Transportation equipment, except automobiles.....	279.8	284.0	289.1	496.5	513.0	533.0	538.5	844.1
Locomotives.....	419.4	414.0	405.1	458.4	855.6	835.4	836.0	894.1
Cars, electric- and steam-railroad.....	196.1	190.1	185.7	165.1	364.9	362.0	341.5	271.7
Aircraft and parts, excluding aircraft engines.....	351.6	338.3	324.2	394.5	663.9	640.8	605.6	624.5
Aircraft engines.....	313.5	309.3	298.3	372.2	509.7	498.3	468.9	469.7
Shipbuilding and boatbuilding.....	207.1	227.9	251.2	643.3	362.1	423.1	468.8	1115.9
Motorcycles, bicycles, and parts.....	160.1	152.9	148.6	88.6	287.3	267.9	239.8	132.7
Automobiles.....	189.8	181.8	173.6	105.9	320.2	308.0	282.2	151.2
Nonferrous metals and their products.....	172.9	171.0	165.0	131.2	320.0	311.4	292.9	223.3
Smelting and refining, primary, of nonferrous metals.....	135.3	133.6	128.2	130.4	247.0	239.5	227.8	231.3
Alloying and rolling and drawing of nonferrous metals except aluminum.....	158.4	157.8	153.2	133.0	284.1	279.7	268.7	222.6
Clocks and watches.....	136.8	135.5	128.5	96.6	289.7	280.8	251.4	168.5
Jewelry (precious metals) and jewelers' findings.....	123.8	120.6	115.5	93.7	237.3	221.1	201.6	160.4
Silverware and plated ware.....	120.0	117.2	112.6	80.1	250.9	232.7	213.7	144.2
Lighting equipment.....	148.6	146.1	142.1	82.2	260.5	252.4	239.2	131.6
Aluminum manufactures.....	211.0	209.6	206.4	152.5	358.1	351.3	340.4	219.9
Sheet-metal work, not elsewhere classified.....	141.1	141.1	133.1	112.4	265.5	273.4	246.1	200.1

See footnotes at end of table.

TABLE 2

Lumber and  
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TABLE 2.—*Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries*—Continued

[1939 average = 100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Sept. 1946	Aug. 1946	July 1946	Sept. 1945	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
<i>Durable goods—Continued</i>								
Lumber and timber basic products.....	148.5	148.7	143.4	120.8	305.7	305.5	270.8	215.3
Sawmills and logging camps.....	80.5	81.7	79.5	72.1	167.5	169.7	151.7	130.3
Planing and plywood mills.....	102.3	101.0	97.3	86.8	198.8	196.2	174.0	145.2
Furniture and finished lumber products.....	118.2	118.1	114.5	92.4	243.4	239.3	222.1	164.0
Mattresses and bedsprings.....	123.6	119.2	112.7	80.3	238.4	223.4	205.9	137.9
Furniture.....	103.3	103.9	101.1	80.6	212.1	209.7	194.2	140.8
Wooden boxes, other than cigar.....	98.9	99.7	97.6	91.3	218.3	223.0	203.4	176.6
Caskets and other morticians' goods.....	106.2	105.1	105.2	90.6	194.5	185.2	182.4	149.6
Wood preserving.....	112.3	110.9	108.4	91.2	266.4	255.1	244.7	209.4
Wood, turned and shaped.....	102.6	103.4	99.9	88.5	209.6	210.9	199.7	159.0
Stone, clay, and glass products.....	138.7	137.8	132.9	105.7	259.8	253.2	235.7	175.7
Glass and glassware.....	149.4	148.5	143.4	121.0	268.9	255.0	238.3	188.9
Glass products made from purchased glass.....	119.9	120.3	114.8	98.1	223.3	227.7	205.5	172.2
Cement.....	121.5	122.0	118.2	81.3	212.5	207.0	196.1	131.0
Brick, tile, and terra cotta.....	111.7	111.7	109.9	75.2	224.1	219.8	210.5	125.6
Pottery and related products.....	145.1	142.6	137.9	113.0	257.7	252.4	229.0	172.7
Gypsum.....	119.7	117.6	111.4	82.9	231.0	226.9	197.6	144.8
Wallboard, plaster (except gypsum), and mineral wool.....	133.0	134.9	108.6	110.9	283.9	280.0	215.7	211.2
Lime.....	93.8	93.7	93.1	77.9	219.5	216.5	201.0	158.3
Marble, granite, slate, and other products.....	94.1	93.4	91.2	64.3	152.9	154.8	147.0	102.0
Abrasives.....	249.3	246.1	243.4	220.6	399.2	407.7	404.5	339.6
Asbestos products.....	128.9	126.1	120.2	110.4	276.3	272.1	252.4	216.9
<i>Nondurable goods</i>								
Textile-mill products and other fiber manufactures.....	106.0	104.7	103.5	91.9	237.2	231.0	214.7	169.7
Cotton manufactures, except small wares.....	115.1	114.2	112.4	102.8	281.7	275.5	246.1	201.0
Cotton smallwares.....	107.5	105.8	103.0	92.9	222.0	220.3	207.6	166.0
Silk and rayon goods.....	77.6	77.2	75.9	70.9	180.9	181.4	166.3	138.2
Woolen and worsted manufactures, except dyeing and finishing.....	107.6	104.4	103.9	91.3	242.7	234.1	228.6	175.4
Hosiery.....	71.8	71.7	71.2	60.5	143.7	141.3	130.9	101.1
Knitted cloth.....	101.0	102.4	101.2	88.3	214.4	213.1	209.0	168.1
Knitted underwear and knitted gloves.....	108.6	105.8	106.8	93.6	234.0	220.1	216.7	172.1
Knitted underwear.....	90.	91.2	90.6	84.3	200.4	196.1	189.7	157.2
Dyeing and finishing textiles including woolen and worsted.....	95.9	95.4	94.2	83.6	186.8	187.6	178.8	144.8
Carpets and rugs, wool.....	96.1	94.7	92.7	69.4	182.5	173.0	165.2	113.7
Hats, fur-felt.....	78.0	61.8	73.7	63.8	181.3	137.9	152.0	124.8
Jute goods, except felts.....	105.7	103.7	104.9	95.3	237.4	225.8	217.2	190.3
Cordage and twine.....	125.5	122.8	118.8	114.2	266.2	255.9	229.3	218.0
Apparel and other finished textile products.....	135.3	132.9	126.7	115.3	288.2	277.5	244.7	208.4
Men's clothing, not elsewhere classified.....	90.2	90.2	87.7	82.5	186.8	182.7	166.8	141.4
Shirts, collars, and nightwear.....	77.3	77.3	76.4	68.8	167.6	162.7	155.3	126.1
Underwear and neckwear, men's.....	76.8	73.8	70.2	70.3	188.1	173.8	157.9	141.8
Work shirts.....	100.6	98.9	98.9	97.1	219.3	214.8	204.2	188.3
Women's clothing, not elsewhere classified.....	79.7	77.9	72.1	74.4	176.0	169.8	141.3	138.4
Corsets and allied garments.....	85.0	84.7	83.0	74.9	171.8	168.6	160.0	132.2
Millinery.....	79.6	77.1	70.5	74.5	149.3	138.7	123.3	131.1
Handkerchiefs.....	46.7	47.3	46.1	53.9	100.7	103.0	93.2	98.1
Curtains, draperies, and bedspreads <sup>1</sup> .....	82.9	82.0	82.8	57.8	175.1	169.5	171.5	111.0
Housefurnishings, other than curtains, etc.....	103.7	104.8	100.2	76.4	218.1	214.6	198.3	131.0
Textile bags.....	112.2	113.7	122.1	120.5	210.0	203.2	208.1	205.7
Leather and leather products.....	102.4	102.0	102.3	88.0	203.3	198.2	197.3	160.2
Leather.....	89.1	88.6	88.1	82.1	160.2	161.1	156.5	146.3
Boot and shoe cut stock and findings.....	93.7	96.6	94.1	86.5	168.4	181.0	167.8	143.4
Boots and shoes.....	88.4	87.8	88.6	75.5	182.7	175.4	177.6	140.3
Leather gloves and mittens.....	109.9	111.5	113.4	109.4	220.6	214.7	217.1	195.3
Trunks and suitcases.....	175.0	177.9	173.0	130.8	333.6	333.0	303.6	212.8
Food.....	135.4	136.5	129.0	138.4	242.7	250.3	231.5	226.6
Slaughtering and meat packing.....	78.6	114.8	102.4	105.0	118.2	202.3	179.9	177.6
Butter.....	140.6	145.4	146.9	132.1	258.2	263.7	267.6	216.2
Condensed and evaporated milk.....	146.6	154.9	162.1	153.9	279.9	293.2	305.9	261.0
Ice cream.....	120.2	128.8	132.7	105.9	204.0	215.7	221.7	161.8
Flour.....	119.9	118.9	114.3	124.3	249.1	238.6	221.1	218.2
Feeds, prepared.....	136.2	145.7	140.6	149.2	261.1	275.2	251.0	267.2
Cereal preparations.....	146.4	135.1	127.4	126.9	269.2	244.4	219.5	243.9
Baking.....	104.6	102.7	101.4	108.8	187.5	184.1	178.5	173.6
Sugar refining, cane.....	90.0	98.8	100.0	92.3	142.0	162.5	167.5	145.3

See footnotes at end of table.

TABLE 2.—*Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries*<sup>1</sup>—Continued

[1939 average = 100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Sept. 1946	Aug. 1946	July 1946	Sept. 1945	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
<i>Nondurable goods—Continued</i>								
Food—Continued								
Sugar, beet	76.1	64.8	43.6	72.5	151.1	107.2	72.0	108.9
Confectionery	104.7	97.7	92.5	102.0	204.2	186.0	169.7	175.4
Beverages, nonalcoholic	113.2	120.6	120.8	120.7	170.6	185.0	186.1	168.4
Malt liquors	150.2	145.2	144.0	153.0	244.2	232.3	222.3	242.6
Canning and preserving	181.4	153.5	136.8	176.3	465.4	387.4	325.8	351.6
Tobacco manufactures	93.5	91.7	90.7	89.5	196.0	186.2	178.3	176.0
Cigarettes	122.5	121.3	122.5	127.2	226.6	218.0	211.1	214.1
Cigars	78.6	76.1	73.9	67.5	180.9	167.4	160.1	148.4
Tobacco (chewing and smoking) and snuff	82.8	83.6	83.1	95.2	150.7	149.3	140.5	164.6
Paper and allied products	138.6	137.8	135.9	117.5	257.1	253.9	243.8	200.7
Paper and pulp	122.0	122.1	120.9	103.3	228.0	227.8	218.4	180.5
Paper goods, other	123.8	122.7	120.8	111.3	225.8	216.4	211.8	182.6
Envelopes	119.3	118.1	116.8	109.6	207.9	205.5	198.4	174.5
Paper bags	132.3	126.3	127.5	109.8	249.8	233.9	237.7	193.4
Paper boxes	126.3	126.1	123.8	111.1	235.8	234.1	222.6	185.5
Printing, publishing, and allied industries	117.9	117.3	116.8	98.8	195.9	190.5	186.0	147.7
Newspapers and periodicals	111.1	110.4	109.6	94.8	176.3	168.8	163.7	130.2
Printing, book and job	126.4	125.6	126.3	105.4	216.1	211.1	209.1	166.5
Lithographing	113.6	112.0	110.8	93.2	185.2	182.6	173.2	141.0
Bookbinding	123.6	124.4	121.0	102.0	247.5	250.9	240.7	184.7
Chemicals and allied products	165.9	164.9	163.7	172.1	298.3	290.5	286.9	292.2
Paints, varnishes, and colors	127.8	127.6	126.6	105.6	201.7	204.2	199.5	167.0
Drugs, medicines, and insecticides	190.6	189.2	187.5	171.2	317.0	314.0	307.0	265.0
Perfumes and cosmetics	118.0	121.4	121.4	120.1	195.2	191.8	191.4	178.9
Soap	104.5	103.8	103.2	97.6	173.2	171.7	170.2	170.2
Rayon and allied products	118.8	118.7	118.0	111.8	210.8	206.2	197.6	179.4
Chemicals, not elsewhere classified	167.6	168.5	168.4	160.5	289.6	288.0	289.2	273.6
Explosives and safety fuses	176.9	173.1	169.8	140.6	292.9	272.6	264.5	238.9
Compressed and liquefied gases	144.5	148.1	145.9	140.6	239.4	247.2	238.8	230.0
Ammunition, small-arms	174.1	115.6	178.0	316.2	339.3	201.4	335.7	561.8
Fireworks	272.5	254.7	244.4	281.8	698.3	623.1	622.1	755.3
Cottonseed oil	88.1	71.4	55.6	97.0	199.9	160.1	119.8	204.8
Fertilizers	118.9	111.5	102.7	111.2	297.6	275.4	246.4	261.0
Products of petroleum and coal	143.8	143.4	142.7	123.3	250.3	246.3	244.3	212.1
Petroleum refining	137.0	137.4	137.4	120.4	232.7	228.7	228.0	203.5
Coke and byproducts	119.4	119.2	117.8	101.9	218.1	216.8	215.1	181.6
Paving materials	97.2	92.5	86.7	71.4	196.9	189.2	174.2	142.0
Roofing materials	156.6	151.0	149.4	122.0	298.6	292.0	279.5	208.7
Rubber products	190.1	187.5	180.2	136.5	365.0	343.2	327.2	231.3
Rubber tires and inner tubes	192.2	189.9	183.1	132.7	340.5	311.2	304.3	211.4
Rubber boots and shoes	120.7	121.3	118.4	99.4	242.5	240.2	226.6	185.6
Rubber goods, other	141.6	139.4	133.8	111.5	282.4	277.7	255.9	193.2
Miscellaneous industries	174.9	173.9	169.2	136.5	334.9	326.9	311.8	239.2
Instruments (professional and scientific), and fire control equipment	188.8	191.3	191.6	236.8	330.7	330.4	327.0	372.7
Photographic apparatus	147.8	148.3	145.9	120.9	240.9	244.6	240.0	190.6
Optical instruments and ophthalmic goods	182.0	182.1	181.8	162.1	322.1	316.5	314.9	265.6
Pianos, organs, and parts	124.0	122.9	118.9	67.8	241.1	230.8	213.7	110.9
Games, toys, and dolls	125.9	122.1	111.3	68.7	258.8	252.1	222.1	124.3
Buttons	96.2	96.3	92.2	80.5	213.2	208.2	195.2	167.7
Fire extinguishers	212.3	209.1	202.1	252.1	414.7	405.8	397.1	463.4

<sup>1</sup> These indexes are based on reports from 33,200 cooperating establishments covering 7,268,000 full- and part-time production workers who worked or received pay during any part of one pay period ending nearest the 15th of September 1946. Indexes for the major industry groups have been adjusted to levels indicated by final 1944 data made available by the Bureau of Employment Security of the Federal Security Agency.

<sup>2</sup> Revisions have been made as follows in the indexes for earlier months:

*Metal doors, sash, frames, molding, and trim.*—August 1945 through June 1946 pay roll to 167.5, 148.1, 155.7, 155.9, 165.2, 158.0, 136.8, 157.9, 189.8, 159.6, and 175.3; January 1946 employment to 95.8, March to 93.0, May and June to 94.4 and 99.9.

*Wrought pipe, welded and heavy-riveted.*—April and June 1946 pay roll to 274.3 and 229.0, respectively; June employment to 134.0.

*Steel barrels, kegs, and drums.*—March through June 1946 pay roll to 148.7, 170.4, 192.0, and 190.3.

*Curtains, draperies, and bedspreads.*—January through June 1946 employment to 70.1, 73.3, 74.1, 74.7, 76.6, and 81.6; pay roll to 138.8, 142.8, 151.6, 157.4, 162.7, and 175.3.

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TABLE 3.—Estimated Number of Employees in Selected Nonmanufacturing Industries <sup>1</sup>

Industry group and industry	Estimated number of employees (in thousands)			
	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
Mining: <sup>2</sup>				
Anthracite.....	68.1	67.9	67.5	64.3
Bituminous coal.....	335	336	332	325
Metal.....	73.7	72.8	68.8	63.7
Iron.....	27.7	28.1	27.4	23.7
Copper.....	21.5	21.2	20.4	18.8
Lead and zinc.....	14.9	13.8	11.5	13.2
Gold and silver.....	7.2	7.2	7.0	5.5
Miscellaneous.....	2.4	2.5	2.5	2.5
Telephone.....	575	575	565	424
Telegraph <sup>3</sup> .....	42.2	42.1	42.3	45.6
Electric light and power.....	249	249	247	206
Street railways and buses.....	252	252	250	229
Hotels (year-round).....	385	385	384	362
Power laundries.....	(4)	(4)	(4)	(4)
Cleaning and dyeing.....	(4)	(4)	(4)	(4)
Class I steam railroads <sup>4</sup> .....	1,362	1,368	1,350	1,414
Water transportation <sup>5</sup> .....	(8)	119	120	168

<sup>1</sup> See footnote 1, table 4.<sup>2</sup> Data are for production workers only.<sup>3</sup> Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.<sup>4</sup> The change in definition from "wage earner" to "production worker" in the power laundries and cleaning and dyeing industries results in the omission of driver-salesmen. This causes a significant difference in the data. New series are being prepared.<sup>5</sup> Source: Interstate Commerce Commission.<sup>6</sup> Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by the Army or Navy. September 1946 data are not available.TABLE 4.—Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries <sup>1</sup>

[1939 average=100]

Industry group and industry	Employment indexes				Pay-roll indexes			
	Sept. 1946	Aug. 1946	July 1946	Sept. 1945	Sept. 1946	Aug. 1946	July 1946	Sept. 1945
Mining:								
Anthracite.....	82.2	82.0	81.4	77.6	191.1	193.3	156.5	149.8
Bituminous coal.....	90.4	90.7	89.5	87.6	232.9	238.9	198.4	199.7
Metal.....	83.5	82.5	78.0	72.2	146.9	145.2	132.4	116.4
Iron.....	138.1	139.3	135.6	118.1	253.3	253.5	247.1	197.5
Copper.....	90.0	88.8	85.6	78.8	163.1	164.1	153.8	127.5
Lead and zinc.....	95.6	89.0	74.2	84.6	188.0	172.1	128.5	159.4
Gold and silver.....	29.0	29.1	28.5	22.3	42.5	43.5	38.5	28.4
Miscellaneous.....	60.4	63.7	62.5	63.6	97.6	103.0	96.7	104.6
Quarrying and nonmetallic.....	102.4	103.2	101.2	82.5	226.7	225.1	213.6	159.2
Crude petroleum production <sup>2</sup> .....	94.1	95.5	95.4	84.0	150.5	152.6	151.3	138.4
Public utilities:								
Telephone.....	181.0	181.1	177.7	133.5	265.0	267.6	268.8	181.7
Telegraph.....	(4)	111.9	112.4	121.2	(5)	178.5	178.6	177.2
Electric light and power.....	101.9	101.9	101.2	84.5	153.3	152.4	150.2	120.6
Street railways and busses.....	129.9	130.2	128.9	118.0	207.9	211.2	206.7	177.1
Wholesale trade.....	109.4	109.1	107.5	97.0	182.8	177.3	174.5	145.6
Retail trade.....	109.8	106.7	106.2	97.6	180.9	174.6	172.6	138.7
Food.....	103.5	103.6	101.3	102.0	173.5	177.3	171.5	145.7
General merchandise.....	125.4	117.4	117.7	110.4	199.0	188.1	187.1	150.0
Apparel.....	116.7	105.8	107.9	106.4	197.5	175.9	177.5	165.0
Furniture and housefurnishings.....	81.5	79.5	78.1	63.2	139.1	129.9	129.6	92.1
Automotive.....	95.5	94.4	93.4	72.3	164.8	160.1	156.8	113.5
Lumber and building materials.....	113.8	112.6	111.1	96.1	191.4	186.1	180.1	146.7
Hotels (year-round) <sup>3</sup> .....	119.5	119.3	119.1	112.2	209.6	208.9	204.9	177.2
Power laundries.....	109.9	111.6	113.6	106.6	188.7	188.4	193.3	168.1
Cleaning and dyeing.....	125.6	124.5	130.0	122.3	227.2	216.9	231.3	199.2
Class I steam railroads <sup>4</sup> .....	137.9	138.5	136.6	143.1	(5)	(5)	(5)	(4)
Water transportation <sup>5</sup> .....	(8)	225.9	228.2	320.5	(6)	478.8	490.1	669.6

<sup>1</sup> These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of one pay period ending nearest the 15th of September 1946, as follows:

Mining—2,800 establishments—346,000 production workers.

Public utilities—3,400 establishments—761,000 employees.

Wholesale trade—12,000 establishments—324,000 employees.

Retail trade—39,800 establishments—1,042,000 employees.

Hotels (year-round)—1,300 establishments—129,000 employees.

Power laundries and cleaning and dyeing—1,500 establishments—72,000 production workers

<sup>2</sup> Does not include well drilling or rig building.<sup>3</sup> Cash payments only; additional value of board, room, and tips, not included.<sup>4</sup> Source: Interstate Commerce Commission.<sup>5</sup> Not available.<sup>6</sup> Based on estimates prepared by the U. S. Maritime Commission covering employment on active deep-sea American-flag steam and motor merchant vessels of 1,000 gross tons and over. Excludes vessels under bareboat charter to, or owned by the Army or Navy.

## Labor Turn-Over in Manufacturing, Mining, and Public Utilities, September 1946

THE September factory hiring rate of 70 per 1,000 workers continued at high levels, exceeding the prewar demand for labor. Women were hired at a higher rate than men in two-thirds of the durable and in all 10 of the nondurable goods groups.

The highest accession rate was reported by the flour and feed milling industry, in which a rate of 108 per 1,000 reflected the change back to the manufacture of white flour, as well as increased orders for flour.

Separation rates also showed tight labor-market characteristics. For every 1,000 employees on factory pay rolls, 52 quit, 4 were discharged, 9 were laid off, and 2 were separated for other reasons. Separation rates in anthracite and bituminous coal mining remained substantially below those in manufacturing industries.

**TABLE 1.—Monthly Labor Turn-Over Rates (Per 100 Employees) in Manufacturing Industries<sup>1</sup>**

Class of turn-over and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total separation:</b>												
1946.....	6.8	6.3	6.6	6.3	6.3	5.7	<sup>2</sup> 5.8	6.6	<sup>2</sup> 6.7	-----	-----	-----
1945.....	6.2	6.0	6.8	6.6	7.0	7.9	7.7	17.9	12.0	8.6	7.1	5.9
1943.....	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.6
1939.....	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.5
<b>Quit:</b>												
1946.....	4.3	3.9	4.2	4.3	4.2	4.0	<sup>2</sup> 4.6	5.3	<sup>2</sup> 5.2	-----	-----	-----
1945.....	4.6	4.3	5.0	4.8	4.8	5.1	5.2	6.2	6.7	5.6	4.7	4.0
1943.....	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.4
1939.....	.9	.8	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.7
<b>Discharge:</b>												
1946.....	.5	.5	.4	.4	.4	.3	.4	.4	<sup>2</sup> .4	-----	-----	-----
1945.....	.7	.7	.7	.6	.6	.7	.6	.4	.6	.5	.5	.4
1943.....	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1
<b>Lay-off:<sup>4</sup></b>												
1946.....	1.8	1.7	1.8	1.4	1.5	1.2	<sup>2</sup> .6	.7	<sup>2</sup> .9	-----	-----	-----
1945.....	.6	.7	.7	.8	1.2	1.7	1.5	10.7	4.5	2.3	1.7	1.3
1943.....	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	1.0
1939.....	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.7
<b>Military and miscellaneous:<sup>3</sup></b>												
1946.....	.2	.2	.2	.2	.2	.2	.2	.2	<sup>2</sup> .2	-----	-----	-----
1945.....	.3	.3	.4	.4	.4	.4	.4	.3	.2	.2	.2	.2
1943.....	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6
<b>Accession:</b>												
1946.....	8.5	6.8	7.1	6.7	6.1	6.7	<sup>2</sup> 7.4	7.0	<sup>2</sup> 7.0	-----	-----	-----
1945.....	7.0	5.0	4.9	4.7	5.0	5.9	5.8	5.9	7.4	8.6	8.7	6.9
1943.....	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	5.2
1939.....	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	2.8

<sup>1</sup> Month-to-month employment changes as indicated by labor turn-over rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month while the latter refer, for the most part, to a 1-week period ending nearest the middle of the month. In addition, labor turn-over data, beginning in January 1943, refer to all employees, whereas the employment and pay-roll reports relate only to production workers. The turn-over sample is not so extensive as that of the employment and pay-roll survey—proportionately fewer small plants are included; printing and publishing, and certain seasonal industries, such as canning and preserving, are not covered. For the month of August, rates are based on reports from 6,900 cooperating establishments, employing 4,400,000 workers.

<sup>2</sup> Revised.

<sup>3</sup> Preliminary.

<sup>4</sup> Including temporary (of more than 7 days' duration), indeterminate, and permanent lay-offs.

<sup>5</sup> Miscellaneous separations comprise not more than 0.1 in these figures. In 1939 these data were included with quits.

Lumber and furniture continued to have the highest quit rates of any of the major industrial groups. Despite the relatively high accession rates in these groups, the respective quit rates of 91 and 82 per 1,000 tended to keep employment from rising. High injury-frequency rates are typical of both groups.

Proportionately more women than men quit factory jobs, while lay-offs and discharges continued lower for women than for men. Although the quit rate for women was considerably higher than that for men in nondurable goods industries, in the durable goods component the rates were closer—58 per 1,000 women and 51 per 1,000 men.

TABLE 2.—*Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries,<sup>1</sup> September 1946<sup>2</sup>*

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.
<b>Manufacturing</b>												
Durable goods.....	6.7	6.7	5.3	5.2	0.4	0.5	0.8	0.8	0.2	0.2	7.2	7.2
Nondurable goods <sup>3</sup> .....	6.6	6.5	5.2	5.4	.3	.4	1.0	.6	.1	.1	6.7	6.8
Iron and steel and their products.....	5.6	5.3	4.5	4.3	.3	.4	.5	.4	.3	.2	5.6	6.1
Blast furnaces, steel works, and rolling mills.....	4.1	3.8	3.4	3.2	.1	.2	.3	.2	.3	.2	3.6	4.1
Gray-iron castings.....	8.9	9.7	7.5	7.9	.8	1.0	.2	.3	.4	.5	10.2	10.5
Malleable-iron castings.....	7.3	8.2	6.6	7.4	.3	.4	.2	.2	.2	.2	9.0	8.5
Steel castings.....	5.3	5.3	4.1	4.0	.5	.5	.4	.6	.3	.2	6.0	5.6
Cast-iron pipe and fittings.....	7.2	6.6	6.5	5.3	.1	.1	.1	1.1	.5	.1	7.1	8.3
Tin cans and other tinware.....	12.7	14.5	9.8	9.5	1.3	2.4	1.5	2.5	.1	.1	8.8	9.3
Wire products.....	4.7	4.1	3.6	3.4	.2	.3	.7	.2	.2	.2	5.0	5.3
Cutlery and edge tools.....	6.2	6.1	4.5	4.8	1.4	.8	.1	.4	.2	.1	8.6	8.5
Tools (except edge tools, machine tools, files, and saws).....	6.6	5.9	5.9	5.1	.4	.5	(4)	.1	.3	.2	7.6	6.5
Hardware.....	7.2	6.7	6.3	5.7	.5	.5	.2	.3	.2	.2	8.3	8.1
Stoves, oil burners, and heating equipment.....	8.1	7.8	6.7	6.4	.8	1.0	.5	.3	.1	.1	10.3	11.0
Steam and hot-water heating apparatus and steam fittings.....	6.4	5.9	5.4	4.5	.5	.6	.4	.5	.1	.3	7.4	8.6
Stamped and enameled ware and galvanizing.....	8.9	8.9	7.4	7.7	.6	.6	.6	.4	.3	.2	8.7	10.8
Fabricated structural-metal products.....	6.6	6.2	5.1	4.9	.4	.5	.8	.7	.3	.1	7.4	8.9
Bolts, nuts, washers, and rivets.....	4.9	4.6	3.8	3.9	.3	.2	.6	.3	.2	.2	5.2	4.9
Forgings, iron and steel.....	4.5	5.1	3.3	3.7	.2	.3	.8	1.0	.2	.1	4.9	5.2
Electrical machinery.....	5.5	5.2	4.4	4.1	.4	.4	.5	.5	.2	.2	7.0	6.7
Electrical equipment for industrial use.....	3.7	3.6	3.0	2.9	.2	.2	.3	.3	.2	.2	4.8	4.7
Radios, radio equipment, and phonographs.....	6.9	6.8	5.5	5.4	.8	.7	.5	.5	.1	.2	8.9	9.0
Communication equipment, except radios.....	4.9	4.2	3.7	3.0	.2	.1	.6	.9	.4	.2	6.6	5.2
Machinery, except electrical.....	4.8	4.8	3.9	3.8	.4	.4	.3	.4	.2	.2	5.7	5.3
Engines and turbines.....	4.7	5.3	3.5	3.7	.6	.5	.3	1.0	.3	.1	7.2	5.8
Agricultural machinery and tractors.....	4.8	4.7	4.1	3.9	.3	.2	.2	.4	.2	.2	5.2	4.7
Machine tools.....	4.1	3.3	3.3	2.5	.2	.3	.4	.3	.2	.2	3.6	3.2
Machine-tool accessories.....	4.4	4.7	3.6	3.8	.4	.5	.3	.3	.1	.1	5.2	5.3
Metalworking machinery and equipment, not elsewhere classified.....	4.8	4.5	4.1	3.7	.4	.4	.2	.3	.1	.1	4.9	4.5
General industrial machinery, except pumps.....	4.8	5.1	3.9	4.1	.4	.5	.4	.4	.1	.1	5.2	5.6
Pumps and pumping equipment.....	5.5	5.2	4.5	4.3	.7	.6	.2	.2	.1	.1	6.1	6.0

See footnotes at end of table.



TABLE 2.—*Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries,<sup>1</sup> September 1946<sup>2</sup>—Continued*

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.
<i>Manufacturing—Continued</i>												
Transportation equipment except automobiles.....	9.5	9.1	4.1	4.1	0.4	0.5	4.8	4.3	0.2	0.2	7.9	7.4
Aircraft.....	7.1	5.4	4.7	4.0	.4	.4	1.8	.9	.2	.1	7.9	7.7
Aircraft parts, including engines.....	7.6	5.4	4.0	3.0	.4	.4	3.1	1.9	.1	.1	6.5	5.0
Shipbuilding and repairs.....	16.3	15.2	4.0	5.0	.6	.8	11.5	9.3	.2	.1	8.4	8.1
Automobiles.....	7.4	7.0	6.0	5.5	.6	.5	.6	.8	.2	.2	9.2	8.5
Motor vehicles, bodies, and trailers.....	7.8	7.2	6.5	5.7	.6	.5	.5	.9	.2	.1	9.5	8.1
Motor-vehicle parts and accessories.....	6.6	6.6	4.8	5.0	.6	.6	.9	.7	.3	.3	8.4	9.3
Nonferrous metals and their products.....	5.9	6.3	4.9	4.9	.5	.6	.3	.6	.2	.2	7.0	7.0
Primary smelting and refining, except aluminum and magnesium.....	4.1	4.9	3.4	3.8	.5	.4	.1	.4	.1	.3	4.7	6.4
Rolling and drawing of copper and copper alloys.....	4.3	4.8	4.0	3.8	.2	.3	(4)	.6	.1	.1	4.3	5.6
Lighting equipment.....	8.3	7.0	6.9	5.8	.5	.4	.8	.7	.1	.1	9.6	8.1
Nonferrous-metal foundries, except aluminum and magnesium.....	5.3	6.3	4.3	4.9	.5	.7	.2	.5	.3	.2	5.9	6.4
Lumber and timber basic products.....	10.1	10.8	9.1	9.7	.4	.5	.4	.5	.2	.1	9.7	10.2
Sawmills.....	10.3	11.2	9.4	10.1	.4	.5	.2	.5	.3	.1	9.6	10.0
Planing and plywood mills.....	6.7	7.7	5.8	6.8	.3	.4	.5	.4	.1	.1	6.6	7.9
Furniture and finished lumber products.....	9.5	9.6	8.2	8.4	.7	.7	.4	.4	.2	.1	10.1	10.6
Furniture, including mattresses, and bedsprings.....	9.5	9.8	8.1	8.5	.7	.7	.4	.4	.3	.2	9.9	10.9
Stone, clay, and glass products.....	6.0	5.8	5.1	4.9	.4	.5	.3	.2	.2	.2	6.3	7.0
Glass and glass products.....	6.0	5.4	4.8	4.3	.4	.5	.5	.3	.3	.3	6.1	6.6
Cement.....	7.4	7.1	6.3	5.9	.6	.6	.3	.1	.2	.5	7.1	8.8
Brick, tile, and terra cotta.....	6.7	8.5	6.0	7.0	.5	.9	.1	.5	.1	.1	7.4	9.4
Pottery and related products.....	5.3	5.2	4.7	4.5	.2	.5	.3	.1	.1	.1	5.6	5.5
Textile-mill products.....	6.1	6.4	5.5	5.6	.3	.4	.2	.3	.1	.1	6.6	6.8
Cotton.....	7.2	7.4	6.4	6.6	.4	.4	.2	.2	.2	.2	7.7	7.9
Silk and rayon goods.....	5.7	5.7	5.0	5.0	.4	.4	.2	.2	.1	.1	6.2	6.4
Woolen and worsted, except dyeing and finishing.....	5.0	4.9	4.3	4.1	.4	.4	.2	.2	.1	.2	5.0	5.1
Hosiery, full-fashioned.....	4.1	4.3	3.7	4.0	.3	.2	.1	.1	(4)	(4)	4.5	4.1
Hosiery, seamless.....	5.6	7.1	5.2	6.7	.2	.2	.1	.1	.1	.1	6.7	6.7
Knitted underwear.....	5.7	6.9	5.3	6.2	.3	.4	.1	.2	(4)	.1	6.1	7.4
Dyeing and finishing textiles, including woolen and worsted.....	4.8	4.7	3.5	3.7	.6	.6	.3	.2	.4	.2	4.5	5.0
Apparel and other finished textile products.....	6.4	7.1	5.9	6.7	.2	.2	.2	.2	.1	(4)	6.8	7.2
Men's and boys' suits, coats, and overcoats.....	3.7	4.9	3.3	4.5	.2	.2	.1	.2	.1	(4)	4.4	5.5
Men's and boys' furnishings, work clothing, and allied garments.....	6.6	7.6	6.3	7.2	.2	.2	.1	.1	(4)	.1	7.2	7.3
Leather and leather products.....	5.8	6.1	5.2	5.5	.2	.2	.3	.3	.1	.1	5.0	5.0
Leather.....	4.6	4.9	3.4	3.8	.1	.2	1.0	.8	.1	.1	3.1	3.4
Boots and shoes.....	6.0	6.3	5.5	5.8	.2	.2	.2	.2	.1	.1	5.4	5.2
Food and kindred products <sup>3</sup> .....	9.7	8.1	5.9	6.0	.4	.5	3.3	1.5	.1	.1	9.8	9.2
Meat products.....	41.4	15.0	3.5	5.6	.3	.6	37.2	8.5	.4	.3	6.2	8.8
Grain-mill products.....	6.6	8.5	5.7	6.0	.3	.8	.5	1.7	.1	(4)	10.8	7.9
Tobacco manufactures.....	6.2	7.3	5.3	6.0	.4	.4	.4	.8	.1	.1	7.2	7.7
Paper and allied products.....	7.2	7.0	6.3	6.1	.5	.5	.2	.2	.2	.2	6.7	6.6
Paper and pulp.....	6.2	5.9	5.4	5.2	.4	.4	.2	.1	.2	.2	5.5	5.9
Paper boxes.....	9.6	9.8	8.4	8.7	.7	.8	.2	.1	.3	.2	9.9	9.3

See footnotes at end of table.

TABLE 2

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TABLE 2.—Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries,<sup>1</sup> September 1946<sup>2</sup>—Continued

Group and industry	Total separation		Quit		Discharge		Lay-off		Military and miscellaneous		Total accession	
	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.
<i>Manufacturing—Continued</i>												
Chemicals and allied products.....	4.1	3.7	3.3	3.0	0.3	0.3	0.3	0.2	0.2	0.2	3.8	4.3
Paints, varnishes, and colors.....	3.8	3.8	3.2	3.2	.1	.4	.3	.1	.2	.1	3.5	4.4
Rayon and allied products.....	3.4	3.1	2.6	2.4	.2	.2	.3	.2	.3	.3	2.8	3.3
Industrial chemicals, except explosives.....	4.4	4.1	3.6	3.2	.4	.4	.2	.3	.2	.2	3.9	5.0
Products of petroleum and coal.....	2.3	2.3	1.7	1.8	.1	.1	.3	.2	.2	.2	2.3	2.4
Petroleum refining.....	2.2	2.1	1.6	1.6	.1	.1	.3	.2	.2	.2	2.2	2.2
Rubber products.....	5.0	5.1	4.4	4.4	.3	.3	.1	.2	.2	.2	6.1	5.9
Rubber tires and inner tubes.....	3.8	3.6	3.3	3.3	.2	.2	.1	(4)	.2	.1	4.6	4.8
Rubber footwear and related products.....	7.2	6.7	6.6	6.0	.3	.3	.1	.2	.2	.2	7.7	7.1
Miscellaneous rubber industries.....	6.9	6.9	5.9	5.8	.6	.5	.2	.4	.2	.2	8.5	7.4
Miscellaneous industries.....	5.7	5.1	4.2	3.8	.3	.3	1.0	.8	.2	.2	5.3	5.2
<i>Nonmanufacturing</i>												
Metal mining: <sup>3</sup> .....	6.5	6.5	5.8	5.2	0.3	0.4	0.1	0.6	0.3	0.3	6.2	6.9
Iron ore.....	4.9	3.2	4.2	2.4	.1	.2	.2	.2	.4	.4	3.4	3.3
Copper ore.....	7.4	8.7	6.5	7.0	.6	.5	.1	1.1	.2	.1	8.4	9.1
Lead and zinc ore.....	6.4	6.9	6.2	6.0	.2	.6	(4)	.2	(4)	.1	6.1	8.6
Coal mining: <sup>3</sup> .....												
Anthracite mining.....	1.5	1.9	1.2	1.4	.1	.1	.1	.3	.1	.1	2.0	2.1
Bituminous-coal mining.....	4.0	4.0	3.3	3.5	.2	.2	.2	.1	.3	.2	3.5	4.5
Public utilities:												
Telephone.....	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
Telegraph.....	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)

<sup>1</sup> Since January 1943 manufacturing firms reporting labor turn-over have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products.

<sup>2</sup> Preliminary.

<sup>3</sup> July rates have been revised as follows:

Industry group	Total separation	Quit	Discharge	Lay-off	Military and miscellaneous	Total accession
Nondurable goods.....	5.6	4.7	0.3	0.5	0.1	6.8
Food and kindred products.....	6.7	5.1	.4	1.1	.1	9.6

<sup>4</sup> Less than 0.05.

<sup>5</sup> Rates for mining industries are based on reports from 480 establishments employing 218,000 persons.

<sup>6</sup> Not available.

TABLE 3.—*Monthly Labor Turn-Over Rates for Men and Women in All Manufacturing and Selected Groups,<sup>1</sup> September 1946<sup>2</sup>*

Industry group	Men (per 100 men)						Women (per 100 women)					
	Total separation		Quit		Accession		Total separation		Quit		Accession	
	September	August	September	August	September	August	September	August	September	August	September	August
All manufacturing <sup>3</sup> .....	6.2	6.1	4.7	4.7	6.4	6.6	7.6	7.5	6.4	6.5	8.5	8.0
Durable goods.....	6.5	6.4	5.1	5.0	6.9	7.1	7.2	7.0	5.8	5.6	8.3	7.7
Nondurable goods <sup>3</sup> .....	5.8	5.5	4.1	4.3	5.5	5.8	7.7	7.6	6.6	6.9	8.5	8.1
Iron and steel and their products.....	5.8	5.3	4.6	4.3	5.8	6.2	7.2	7.0	5.8	5.6	7.3	7.3
Electrical machinery.....	4.3	3.7	3.3	2.9	5.4	5.5	7.6	7.4	6.3	6.1	9.7	8.9
Machinery, except electrical.....	4.6	4.6	3.6	3.6	5.4	5.2	5.8	5.9	4.8	4.6	6.1	5.5
Transportation equipment, except automobiles.....	8.6	8.9	4.2	4.2	7.9	7.7	7.0	6.1	4.4	3.8	6.9	5.9
Automobiles.....	6.8	6.6	5.4	5.0	8.3	7.9	6.8	6.6	4.2	4.3	8.2	8.7
Nonferrous metals and their products.....	5.5	5.9	4.5	4.6	6.3	7.0	7.3	7.6	6.4	6.1	9.4	7.3
Lumber and timber basic products.....	10.3	11.1	9.3	9.9	9.8	10.4	7.7	6.5	6.7	6.1	7.9	7.8
Furniture and finished lumber products.....	9.5	9.6	8.2	8.4	9.9	10.9	9.5	9.7	8.1	8.4	10.8	9.4
Stone, clay, and glass products.....	5.8	5.8	4.9	4.8	6.0	6.9	6.5	6.0	5.7	5.3	7.3	7.0
Textile-mill products.....	5.9	6.2	5.1	5.1	6.2	6.8	6.4	6.6	5.8	6.1	7.1	6.8
Apparel and other finished textile products.....	4.0	4.2	3.5	3.6	5.1	4.8	6.6	7.6	6.1	7.3	7.0	7.5
Leather and leather products.....	4.9	4.8	4.2	4.3	3.8	4.2	7.2	7.7	6.7	7.2	6.8	6.0
Food and kindred products <sup>3</sup> .....	8.5	7.3	4.5	5.1	7.3	7.3	13.4	10.3	10.1	8.5	17.1	14.2
Tobacco manufacturers.....	5.7	6.2	4.3	4.4	4.9	6.8	6.6	8.0	5.8	6.9	8.6	8.2
Paper and allied products.....	6.4	6.4	5.6	5.5	6.3	6.3	9.5	8.7	8.6	8.2	8.3	8.1
Chemicals and allied products.....	3.7	3.4	3.0	2.7	3.5	4.3	5.5	5.2	4.5	4.2	4.9	4.4
Products of petroleum and coal.....	2.2	2.0	1.6	1.6	2.1	2.3	5.3	6.0	4.1	3.8	5.3	3.8
Rubber products.....	4.5	4.6	3.9	4.0	5.4	5.5	6.6	6.2	5.9	5.5	8.1	7.1
Miscellaneous industries.....	5.1	4.3	3.6	3.1	4.4	4.7	6.8	6.4	5.2	5.0	6.9	6.1

<sup>1</sup> These figures are based on a slightly smaller sample than that for all employees, inasmuch as some firms do not report separate data for women. Rates for August are based on 6,800 reports covering 4,167,000 employees.

<sup>2</sup> Preliminary figures.

<sup>3</sup> July rates have been revised as follows:

Industry group	Men			Women		
	Total separation	Quit	Accession	Total separation	Quit	Accession
All manufacturing.....	5.3	4.1	7.3	6.5	5.6	7.3
Nondurable goods.....	4.8	3.8	6.4	6.7	6.0	7.2
Food and kindred products.....	5.9	4.3	9.0	8.9	7.4	11.1



# Trends of Earnings and Hours

## Summary of Earnings and Hours Data for September 1946

WEEKLY earnings in manufacturing industries, according to preliminary estimates, averaged \$45.68 in October 1946, a level almost \$5 above last October but still about \$1.50 below the January 1945 wartime peak. The average workweek in October 1946 was about 1 hour below that of last October and about 5 hours below January 1945.

Preliminary averages for October 1946 are as follows:

	<i>Weekly earnings</i>	<i>Weekly hours</i>	<i>Hourly earnings (in cents)</i>
All manufacturing.....	\$45. 68	40. 4	113. 0
Durable goods.....	48. 83	40. 6	120. 2
Nondurable goods.....	42. 42	40. 2	105. 5

Final September figures in both anthracite and bituminous-coal mining industries indicate that declines in average weekly earnings were largely due to the Labor Day holiday and to the continued critical shortage of railroad cars. In bituminous-coal mining, earnings declined from \$62.37 a week in August to \$61.00 in September, while average hours worked per week fell from 42.4 to 41.4. Average weekly earnings in anthracite mining also declined over the month from \$60.65 in August to \$59.78 in September, reflecting a slight decline in hours.

Wage increases and premium overtime work combined to raise average weekly earnings in September above the August level in 17 of the 20 major manufacturing groups, despite plant closings in observance of Labor Day. In 8 of the groups a somewhat longer workweek was reported in September than in August, reflecting mainly the termination of strikes and the easing of raw material shortages.

The automobile, transportation equipment, and food groups were the only major industrial groups failing to show an increase in average weekly earnings over the month. The curtailment of operations in the shipbuilding industry owing to the maritime strike contributed heavily to the decline in earnings in the transportation equipment group. Raw material shortages, the trucking strike, seasonal declines,

and the exemption of the canning industry from overtime provisions in September, the month of peak production, combined to keep weekly earnings down in the food group.

Weekly earnings averaged above \$37 in all major manufacturing groups except tobacco, and above \$50 in 6 groups. In the tobacco group, weekly earnings in September averaged over \$35 for the first time on record. This represents an increase of more than \$2 a week over September 1945, when the average workweek was 3 hours longer (or an increase in average hourly earnings amounting to 11 cents over the year).

*Earnings and Hours in Manufacturing and Nonmanufacturing Industries,  
September 1946*

MANUFACTURING

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946
<b>All manufacturing</b> .....	\$45.41	\$44.98	\$43.38	40.3	40.5	39.7	<i>Cents</i> 112.6	<i>Cents</i> 111.1	<i>Cents</i> 109.3
Durable goods.....	48.39	48.00	46.24	40.3	40.5	39.3	120.1	118.6	117.7
Nondurable goods.....	42.34	41.89	40.46	40.3	40.5	40.1	104.9	103.6	100.9
<i>Durable goods</i>									
<b>Iron and steel and their products</b> .....	49.31	48.78	46.80	39.7	39.9	38.5	124.2	122.2	121.6
Blast furnaces, steel works, and rolling mills.....	50.28	49.84	47.85	38.0	38.2	36.4	132.5	130.5	131.4
Gray-iron and semisteel castings.....	52.58	50.95	48.53	42.3	41.8	40.4	124.3	122.0	120.3
Malleable-iron castings.....	51.50	51.28	49.60	40.7	40.7	40.6	126.6	126.0	122.2
Steel castings.....	49.28	49.32	46.35	38.3	38.9	36.7	128.6	126.9	126.3
Cast-iron pipe and fittings.....	43.59	42.30	41.55	40.8	40.8	40.1	107.4	103.6	103.5
Tin cans and other tinware.....	46.22	45.97	43.47	41.9	42.6	40.9	111.1	108.6	106.7
Wirework.....	50.30	49.37	49.61	41.4	41.8	41.9	121.3	118.9	118.3
Cutlery and edge tools.....	45.83	44.98	43.74	43.0	43.1	42.3	106.5	104.3	103.2
Tools (except edge tools, machine tools, files, and saws).....	47.59	46.91	46.16	42.5	42.4	42.5	112.1	110.6	108.7
Hardware.....	45.26	44.88	44.20	41.4	41.7	41.2	109.5	106.9	106.6
Plumbers' supplies.....	45.63	46.00	43.98	39.4	40.2	39.0	115.7	113.8	112.8
Stoves, oil burners, and heating equipment, not elsewhere classified.....	47.36	47.16	44.68	40.2	40.6	39.6	117.8	116.1	112.9
Steam and hot-water heating apparatus and steam fittings.....	49.72	47.81	46.28	40.8	40.3	39.5	121.9	118.6	117.2
Stamped and enameled ware and galvanizing.....	45.53	45.53	43.15	39.9	40.5	38.7	114.6	112.5	111.4
Fabricated structural and ornamental metalwork.....	48.71	48.35	46.38	40.5	40.5	39.3	120.4	119.3	118.5
Metal doors, sash, frames, molding, and trim <sup>2</sup> .....	51.40	50.20	49.59	40.5	41.2	41.3	126.9	121.9	120.1
Bolts, nuts, washers, and rivets.....	45.67	46.55	41.59	38.8	40.4	36.6	116.6	114.3	113.0
Forgings, iron and steel.....	53.52	53.94	49.72	39.5	40.0	37.8	136.3	134.9	131.4
Screw-machine products and wood screws.....	50.86	50.86	48.69	42.0	42.8	41.5	120.5	118.7	117.4
Steel barrels, kegs, and drums <sup>2</sup> .....	45.46	47.06	42.94	39.8	41.7	38.2	114.3	113.0	112.5
Firearms.....	53.30	49.86	51.06	42.3	40.4	41.0	125.9	123.5	124.4
<b>Electrical machinery</b> .....	48.45	47.57	45.59	40.8	40.5	39.4	118.9	117.3	115.8
Electrical equipment.....	49.41	48.54	46.31	40.5	40.2	38.9	121.9	120.4	118.9
Radios and phonographs.....	43.11	41.96	40.40	40.3	39.9	39.1	107.2	105.2	103.4
Communication equipment.....	50.41	49.88	47.80	42.2	42.2	41.1	119.6	118.3	116.4
<b>Machinery, except electrical</b> .....	51.79	51.03	49.76	41.1	40.9	40.4	126.1	124.7	123.2
Machinery and machine-shop products.....	51.08	51.06	49.49	41.2	41.6	40.7	124.0	123.1	121.2
Engines and turbines.....	55.26	51.95	52.86	40.5	39.0	40.3	136.5	132.8	131.3
Tractors.....	51.21	51.01	49.73	39.3	39.1	37.9	130.2	130.3	131.1
Agricultural machinery, excluding tractors.....	51.09	49.20	48.02	40.4	39.9	39.7	126.9	123.8	121.5
Machine tools.....	54.31	54.07	52.44	42.0	42.0	41.3	129.9	129.1	126.9
Machine-tool accessories.....	56.28	54.49	52.09	41.5	40.8	40.0	136.0	134.0	130.5
Textile machinery.....	49.43	48.28	47.42	42.6	41.9	41.4	116.1	115.2	114.4
Typewriters.....	47.19	46.01	46.49	41.7	41.1	41.7	113.2	111.9	111.6

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*Earnings and Hours in Manufacturing and Nonmanufacturing Industries,  
September 1946—Continued*

MANUFACTURING—Continued

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946
<i>Durable goods—Continued</i>									
Machinery, except electrical—Continued							<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Cash registers, adding and calculating machines.....	\$58.20	\$52.84	\$56.29	42.6	39.9	41.9	136.9	133.8	134.9
Washing machines, wringers and driers, domestic.....	47.87	46.30	44.99	41.7	41.2	40.7	114.7	112.4	110.5
Sewing machines, domestic and industrial.....	51.15	52.27	49.58	40.4	42.1	43.1	127.4	124.8	115.6
Refrigerators and refrigeration equipment.....	49.54	48.46	46.77	40.3	39.7	38.6	122.9	122.2	121.0
Transportation equipment, except automobiles.....	52.81	54.18	53.70	39.0	40.0	39.3	135.5	135.5	136.6
Locomotives.....	58.12	57.48	59.18	39.6	39.8	40.5	146.8	144.5	146.0
Cars, electric- and steam-railroad.....	49.08	50.23	48.21	39.7	41.1	39.6	123.4	122.3	121.9
Aircraft and parts, excluding aircraft engines.....	53.51	53.68	53.01	40.8	41.0	40.0	131.3	131.3	132.5
Aircraft engines.....	56.67	56.08	54.72	41.7	41.4	40.6	135.8	135.4	134.8
Shipbuilding and boatbuilding.....	51.70	54.91	55.20	36.2	38.5	38.4	143.0	143.1	143.6
Motorcycles, bicycles, and parts.....	49.65	48.50	44.64	40.1	40.0	38.2	123.8	121.2	116.9
Automobiles.....	53.12	53.39	51.15	38.7	39.2	37.8	137.4	136.1	135.4
Nonferrous metals and their products.....	48.68	47.93	46.68	40.7	40.7	40.0	119.6	117.8	116.6
Smelting and refining, primary, of nonferrous metals.....	48.74	47.85	47.42	40.3	40.2	39.9	120.8	118.9	118.9
Alloying and rolling and drawing of nonferrous metals, except aluminum.....	51.50	50.90	50.34	40.5	40.4	40.2	127.5	126.5	125.2
Clocks and watches.....	43.56	42.86	40.44	40.9	41.0	39.8	107.1	104.5	101.7
Jewelry (precious metals) and jewelers' findings.....	48.96	46.82	44.69	43.6	42.7	42.0	112.4	109.0	105.7
Silverware and plated ware.....	55.60	52.78	50.29	45.9	45.2	43.9	121.2	116.8	114.6
Lighting equipment.....	46.18	45.63	44.44	39.3	39.1	38.2	117.8	116.6	116.3
Aluminum manufactures.....	47.10	46.73	45.98	39.6	39.7	39.1	119.7	117.6	117.6
Lumber and timber basic products.....	38.79	38.76	35.60	41.4	41.7	39.1	93.7	92.8	91.0
Sawmills and logging camps.....	37.72	37.70	34.66	41.1	41.4	38.9	91.7	91.1	89.2
Planing and plywood mills.....	41.97	42.17	38.71	42.3	42.9	40.0	99.6	98.2	96.5
Furniture and finished lumber products.....	40.84	40.15	38.37	41.8	41.9	41.0	97.7	95.7	93.7
Furniture.....	41.58	40.85	38.80	41.6	41.7	40.6	100.1	98.2	95.7
Caskets and other morticians' goods.....	42.47	40.86	40.23	42.4	42.0	41.5	101.1	97.0	96.4
Wood preserving.....	37.99	36.84	36.15	41.4	41.4	40.9	92.1	89.4	88.4
Stone, clay, and glass products.....	44.15	43.27	41.80	40.6	40.7	39.5	108.8	106.3	105.7
Glass and glassware.....	45.29	43.14	41.87	39.5	39.4	38.0	114.7	109.5	110.2
Glass products made from purchased glass.....	38.86	39.46	37.33	40.6	41.9	40.4	93.6	91.9	90.2
Cement.....	47.03	45.63	44.66	42.9	42.3	41.7	109.7	107.9	107.2
Brick, tile, and terra cotta.....	41.47	40.67	39.44	40.5	40.0	39.8	102.1	101.2	99.1
Pottery and related products.....	41.42	41.34	38.84	38.1	38.5	36.5	108.9	107.9	106.8
Gypsum.....	50.46	50.45	46.40	46.6	47.2	44.3	108.4	106.9	104.8
Lime.....	45.96	45.27	42.11	46.9	46.6	44.9	98.1	96.7	93.2
Marble, granite, slate, and other products.....	42.64	43.63	42.44	41.8	43.1	41.9	102.2	100.7	100.4
Abrasives.....	45.38	47.02	47.02	37.9	40.1	39.9	119.7	116.7	117.9
Asbestos products.....	49.67	50.02	48.70	43.3	43.9	42.9	115.2	114.4	113.6
<i>Nondurable goods</i>									
Textile-mill products and other fiber manufactures.....	37.53	36.99	34.76	40.0	40.1	39.6	93.9	92.3	87.7
Cotton manufactures, except smallwares.....	35.35	34.81	31.64	39.8	39.8	39.4	88.8	87.5	80.3
Cotton smallwares.....	38.33	38.67	37.44	40.5	41.0	41.2	94.7	94.2	90.9
Silk and rayon goods.....	37.20	37.42	34.94	40.4	41.3	40.7	92.2	90.6	85.8
Woolen and worsted manufactures, except dyeing and finishing.....	42.44	41.88	41.18	41.1	40.9	40.5	103.4	102.4	101.7
Hosiery.....	36.60	36.07	33.47	37.7	38.1	37.2	97.0	94.3	89.9
Knitted cloth.....	39.76	39.29	38.98	41.8	42.2	42.3	95.1	93.1	92.3
Knitted outerwear and knitted gloves.....	35.84	34.35	33.73	38.6	38.6	38.6	91.8	88.1	87.0
Knitted underwear.....	32.70	31.79	31.00	38.1	38.1	38.1	85.2	83.0	81.0
Dyeing and finishing textiles, including woolen and worsted.....	40.72	40.92	39.66	41.4	42.1	41.9	98.3	97.1	94.5
Carpets and rugs, wool.....	43.72	42.10	41.03	41.3	40.4	40.0	106.1	104.3	102.7
Hats, fur-felt.....	53.25	52.93	48.38	40.9	39.8	39.3	131.3	135.4	123.3
Jute goods, except felts.....	39.47	38.23	36.39	44.0	43.4	42.2	91.2	89.7	87.8
Cordage and twine.....	37.86	37.17	34.43	41.4	41.3	40.2	91.4	90.1	85.6

See footnotes at end of table.



*Earnings and Hours in Manufacturing and Nonmanufacturing Industries,  
September 1946—Continued*

**MANUFACTURING—Continued**

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946
<i>Nondurable goods—Continued</i>									
Apparel and other finished textile products.....	\$37.32	\$36.53	\$33.83	36.9	37.1	36.0	Cents 101.0	Cents 98.5	Cents 94.1
Men's clothing, not elsewhere classified.....	39.14	38.11	35.84	37.7	37.5	36.2	102.7	100.9	98.5
Shirts, collars, and nightwear.....	29.60	28.71	27.90	37.2	36.9	36.1	80.0	78.1	76.9
Underwear and neckwear, men's.....	32.61	31.31	29.90	37.5	37.2	36.4	87.1	84.2	82.2
Work shirts.....	23.55	23.48	22.30	34.5	35.7	34.4	68.2	65.8	64.8
Women's clothing, not elsewhere classified.....	48.14	47.54	42.67	36.1	36.6	35.4	129.8	126.0	118.0
Corsets and allied garments.....	35.09	34.58	33.50	38.0	38.3	37.8	92.9	90.7	88.7
Millinery.....	45.75	43.90	42.65	33.3	33.1	32.4	113.1	109.5	108.0
Handkerchiefs.....	28.36	28.61	26.43	35.0	36.4	34.7	81.2	78.9	76.4
Curtains, draperies, and bedspreads <sup>2</sup> .....	28.29	27.58	27.64	35.7	35.5	36.1	80.1	78.4	77.0
Housefurnishings other than curtains, etc.....	36.36	35.38	34.12	38.9	38.7	38.2	93.6	91.1	88.9
Textile bags.....	33.03	31.53	30.06	39.7	38.7	38.0	83.1	81.5	79.0
Leather and leather products.....	37.49	36.74	36.46	38.2	37.8	38.2	98.2	97.2	95.4
Leather.....	44.60	45.08	44.08	39.5	40.3	40.1	112.9	112.0	110.2
Boot and shoe cut stock and findings.....	36.06	37.69	35.86	38.7	40.2	39.8	93.5	94.0	90.4
Boots and shoes.....	36.71	35.17	35.38	37.8	36.9	37.8	95.4	94.5	92.7
Leather gloves and mittens.....	33.68	32.33	32.14	37.0	36.7	36.5	91.9	88.3	88.3
Trunks and suitcases.....	39.46	38.96	36.57	39.3	39.5	37.1	100.4	98.3	98.3
Food.....	43.56	44.34	43.22	43.0	43.7	43.8	101.3	101.5	98.6
Slaughtering and meat packing.....	41.11	48.37	48.05	35.9	43.4	43.0	114.4	111.6	111.5
Butter.....	41.54	40.73	40.71	46.3	46.3	47.4	88.9	88.0	85.6
Condensed and evaporated milk.....	43.95	43.55	43.48	47.6	48.0	48.8	92.4	90.8	89.1
Ice cream.....	46.48	45.71	45.67	46.8	47.6	48.3	95.6	93.5	92.3
Flour.....	52.30	50.37	48.63	49.2	49.3	48.8	106.4	102.4	99.7
Cereal preparations.....	46.85	46.04	43.85	42.1	42.4	41.5	111.5	108.9	105.8
Baking.....	44.60	44.63	43.81	44.5	45.0	44.8	100.3	99.4	98.0
Sugar refining, cane.....	37.99	39.27	39.97	37.9	39.1	39.3	100.1	100.4	101.8
Sugar, beet.....	49.24	40.92	40.67	42.9	38.3	37.3	114.7	106.8	109.1
Confectionery.....	35.90	35.03	33.76	39.8	39.6	38.6	96.5	85.9	85.4
Beverages, nonalcoholic.....	39.95	40.45	40.52	43.8	44.2	44.7	90.3	91.1	90.2
Malt liquors.....	57.45	56.36	54.21	42.7	42.5	42.0	134.4	132.4	129.1
Canning and preserving.....	41.54	41.12	38.89	43.4	42.3	43.2	96.3	97.6	90.4
Tobacco manufactures.....	35.37	34.26	33.24	39.3	38.7	39.1	89.9	88.6	85.1
Cigarettes.....	39.33	38.21	36.66	40.1	39.1	40.1	98.2	97.8	91.5
Cigars.....	32.84	31.50	31.05	39.0	38.6	38.6	83.9	81.4	80.3
Tobacco (chewing and smoking) and snuff.....	31.87	31.28	29.45	38.0	37.4	37.1	83.9	83.7	79.4
Paper and allied products.....	44.47	44.23	43.12	42.9	43.4	42.8	103.6	101.9	100.7
Paper and pulp.....	47.57	47.56	46.06	43.8	44.4	43.8	108.6	107.0	105.3
Envelopes.....	41.93	41.61	40.61	42.6	42.7	42.5	97.7	97.5	95.6
Paper bags.....	37.89	37.17	37.42	40.9	40.9	41.3	93.1	91.1	91.1
Paper boxes.....	41.13	41.07	39.93	42.0	42.6	41.9	98.1	96.6	95.3
Printing, publishing, and allied industries.....	54.19	53.03	51.79	41.2	40.9	40.2	131.7	129.8	128.7
Newspapers and periodicals.....	60.33	58.10	56.62	39.4	38.7	37.9	150.0	147.4	145.9
Printing, book and job.....	51.81	50.93	50.03	42.2	41.9	41.5	123.3	122.0	121.2
Lithographing.....	53.89	54.10	51.80	43.0	43.3	41.8	126.1	124.8	124.1
Chemicals and allied products.....	45.35	44.94	44.67	40.9	40.8	40.7	110.9	110.1	109.8
Paints, varnishes, and colors.....	46.63	47.41	46.62	41.4	42.6	42.2	112.5	111.4	110.9
Drugs, medicines, and insecticides.....	39.08	38.95	38.42	39.5	40.0	39.7	98.4	97.7	97.0
Soap.....	47.29	47.21	47.08	40.5	40.7	41.0	116.7	115.9	114.8
Rayon and allied products.....	43.55	42.62	41.08	39.3	39.1	38.6	110.7	108.9	106.5
Chemicals, not elsewhere classified.....	52.61	51.81	52.09	41.1	41.1	41.5	128.1	126.0	125.6
Explosives and safety fuses.....	50.98	48.37	47.96	41.3	39.1	38.9	123.3	123.7	123.3
Ammunition, small-arms.....	44.05	39.53	42.65	39.1	38.7	38.6	112.7	102.3	110.6
Cottonseed oil.....	31.36	30.97	29.65	49.4	47.2	47.0	63.1	65.4	63.1
Fertilizers.....	35.74	35.09	34.11	42.4	42.1	42.7	84.3	83.4	79.8
Products of petroleum and coal.....	55.20	54.30	54.19	40.3	40.3	40.0	136.9	134.7	135.5
Petroleum refining.....	58.35	57.10	57.02	40.2	40.0	39.7	145.3	142.7	143.7
Coke and by-products.....	46.63	46.45	46.65	39.1	39.4	38.9	119.0	117.6	119.5
Roofing materials.....	48.93	49.61	48.06	43.5	44.5	44.5	112.4	111.4	108.0

See footnotes at end of table.

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**Earnings and Hours in Manufacturing and Nonmanufacturing Industries  
September 1945—Continued**

**MANUFACTURING—Continued**

Industry group and industry	Average weekly earnings <sup>1</sup>			Average weekly hours <sup>1</sup>			Average hourly earnings <sup>1</sup>		
	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946	Sept. 1946	Aug. 1946	July 1946
<i>Nondurable goods—Continued</i>									
Rubber products.....	\$53.60	\$51.04	\$50.60	40.6	39.4	39.2	<i>Cents</i> 132.0	<i>Cents</i> 129.6	<i>Cents</i> 129.2
Rubber tires and inner tubes.....	59.91	55.43	56.11	39.7	37.3	38.0	150.5	147.7	147.2
Rubber boots and shoes.....	45.10	44.45	42.98	41.6	41.2	39.6	108.4	107.8	108.5
Rubber goods, other.....	47.02	46.85	44.93	41.7	41.8	40.8	112.7	112.0	110.2
Miscellaneous industries.....	44.11	43.30	42.42	41.2	41.0	40.5	107.2	105.7	104.8
Instruments (professional and scientific), and fire control equipment.....	50.43	49.74	49.06	40.3	40.2	39.9	124.3	123.3	122.9
Pianos, organs, and parts.....	47.73	46.11	44.04	42.2	41.3	40.6	113.4	112.1	108.6

**NONMANUFACTURING**

Mining:							<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Anthracite.....	\$59.78	\$60.65	\$49.53	37.7	37.9	31.7	158.7	159.8	156.2
Bituminous coal.....	61.00	62.37	52.27	41.4	42.4	36.0	148.0	146.8	145.7
Metal.....	49.50	49.59	47.70	40.5	40.9	39.6	122.1	121.2	120.5
Iron.....	48.45	48.03	48.10	39.8	40.2	40.2	121.9	119.4	119.8
Copper.....	51.09	52.13	50.47	41.9	42.4	41.2	122.1	123.1	122.5
Lead and zinc.....	49.60	48.70	43.60	40.3	39.9	36.2	122.5	121.9	120.4
Quarrying and nonmetallic.....	47.97	47.04	45.51	46.2	46.5	45.4	104.2	101.5	100.4
Crude-petroleum production.....	53.43	53.35	52.97	40.9	40.9	40.4	130.7	130.4	131.1
Public utilities:									
Telephone.....	44.10	44.19	44.82	38.5	39.3	39.7	114.8	112.9	113.5
Telegraph <sup>2</sup> .....	40.98	41.31	41.15	44.8	45.4	45.2	91.4	91.0	91.0
Electric light and power.....	52.78	52.27	51.96	41.0	41.6	41.5	129.1	126.0	125.8
Street railways and busses.....	54.62	55.35	54.60	47.5	48.6	48.4	111.0	109.9	109.7
Trade:									
Wholesale.....	49.54	48.14	48.06	41.8	41.7	41.4	117.9	114.8	115.5
Retail <sup>3</sup> .....	33.76	33.81	33.64	40.9	41.5	41.3	90.6	89.1	88.8
Food.....	39.42	40.22	40.20	41.1	42.7	42.3	93.7	92.4	92.1
General merchandise.....	28.57	28.63	28.22	36.7	37.6	37.5	75.6	74.7	74.2
Apparel.....	35.26	34.93	34.27	37.2	37.5	37.4	95.6	92.7	92.6
Furniture and housefurnishings <sup>4</sup> .....	46.59	44.52	44.86	43.9	43.5	43.8	108.0	104.5	105.8
Automotive.....	49.15	47.97	47.36	46.4	46.1	46.1	107.5	105.8	104.6
Lumber and building materials.....	43.60	42.93	42.32	43.1	43.0	42.7	102.7	101.3	100.1
Hotels (year-round) <sup>4</sup> .....	27.20	27.15	26.63	43.5	43.8	44.0	62.0	61.4	60.2
Power laundries.....	30.45	29.97	30.37	42.9	43.0	43.4	70.8	69.3	69.8
Cleaning and dyeing.....	36.36	35.01	35.58	42.9	42.6	43.2	85.0	83.2	82.6
Brokerage.....	63.50	62.61	64.04	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Insurance.....	50.63	49.87	50.76	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )

<sup>1</sup> These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during any part of 1 pay period ending nearest the 15th of September 1946, as follows:

*Manufacturing.*—32,000 establishments, 7,121,000 production workers.

*Mining.*—2,600 establishments, 311,000 production workers.

*Public utilities.*—3,000 establishments, 667,000 employees.

*Wholesale trade.*—9,000 establishments, 240,000 employees.

*Retail trade.*—28,100 establishments, 720,000 employees.

*Hotels (year-round).*—900 establishments, 78,000 employees.

*Power laundries and cleaning and dyeing.*—1,300 establishments, 62,000 production workers.

*Brokerage and insurance.*—3,400 establishments, 147,000 employees.

As not all reporting firms furnish man-hour data, average hours and average hourly earnings for individual industries are based on a slightly smaller sample than are weekly earnings. For manufacturing, mining, power laundries, and cleaning and dyeing industries, the data relate to production workers only. For the remaining industries the data relate to all employees except high-paid executives and officials. Data for the current and immediately preceding months are subject to revision.

<sup>2</sup> Revisions have been made as follows in the data for earlier months:

*Metal doors, sash, frames, mcliding, and trim.*—December 1945 to \$48.19, May and June to \$45.49 and

\$47.08. October 1945 through February 1946 to 43.0, 42.9, 43.9, 41.4, and 41.7 hours; 108.1, 108.5, 109.7,

107.3, and 104.6 cents. New series beginning March 1946; not comparable with previously published

data. New data for March through June are 41.8, 42.3, 40.7, and 41.8 hours; 110.1, 114.6, 111.7, and

112.5 cents. Comparable February data are 40.5 hours and 108.5 cents.

*Steel barrels, kegs, and drums.*—March through June 1946 to \$42.47, \$45.79, \$45.30, and \$44.32; 40.3, 41.5,

41.1, and 40.4 hours; May and June to 110.1 and 109.8 cents.

*Curtains, draperies, and bedspreads.*—May 1946 to 77.7 cents.

*Retail trade.*—June 1946 to \$32.93.

*Furniture and housefurnishings.*—June 1946 to \$44.33.

<sup>3</sup> Excludes messengers, and approximately 6,000 employees of general and divisional headquarters, and of cable companies.

<sup>4</sup> Cash payments only; additional value of board, room, and tips not included.

<sup>5</sup> Not available.

## Trend of Factory Earnings, 1939 to September 1946

THE average earnings of factory workers are summarized in the accompanying table for selected months from January 1939 to September 1946.<sup>1</sup> The earnings shown in this table are on a gross basis (i. e., before deductions for social security, income taxes, bond purchases, etc.).

Weekly earnings in all manufacturing averaged \$45.41 in September 1946—95.8 percent above the average in January 1939, 70.5 percent above January 1941, and 16.8 percent above October 1942. Weekly earnings for September 1946 increased 11.1 percent above September 1945. However, average weekly earnings were still below the wartime peak of \$47.50 (in January 1945), as a result of shorter working hours and shifts of workers from the high-paid war industries to the lower-paid consumer-goods industries.

Gross hourly earnings in all manufacturing averaged 112.6 cents in September 1946—78.2 percent above the average in January 1939, 64.9 percent above January 1941, and 26.1 percent above October 1942.

Straight-time average hourly earnings, as shown in columns 7 to 9, are weighted by man-hours of employment in the major divisions of manufacturing for January 1941. These earnings are estimated to exclude premium pay at time and a half for work in excess of 40 hours. However, the effect of extra pay for work on supplementary shifts and on holidays is included. For all manufacturing, the straight-time average in September 1946 was 109.3 cents per hour; this was 70.5 percent higher than in January 1939, 64.6 percent above January 1941, and 35.4 percent above October 1942.

<sup>1</sup> Compare Trends in Factory Wages, 1939-43, in Monthly Labor Review, November 1943 (p. 869), especially table 4 (p. 879). For detailed data regarding weekly earnings, see preceding table.

1939: Ja  
1940: Ja  
1941: Ja

1942: Ja  
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Oc

1943: Ja  
Ap  
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1944: Ja  
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1945: Ja  
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1946: Ja  
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*Earnings of Factory Workers in Selected Months, 1939 to September 1946*

Month and year	Average weekly earnings			Average hourly earnings			Estimated straight-time average hourly earnings <sup>1</sup> weighted by January 1941 employment.		
	All manu- factur- ing	Dur- able goods	Non- dur- able goods	All manu- factur- ing	Dur- able goods	Non- dur- able goods	All manu- factur- ing	Dur- able goods	Non- dur- able goods
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1939: January.....	\$23.19	\$25.33	\$21.57	\$0.632	\$0.696	\$0.583	\$0.641	\$0.702	\$0.575
1940: January.....	24.56	27.39	22.01	.655	.717	.598	.652	.708	.589
1941: January.....	26.64	30.48	22.75	.683	.749	.610	.664	.722	.601
1942: January.....	33.40	38.98	26.97	.801	.890	.688	.751	.826	.668
July.....	36.43	42.51	28.94	.856	.949	.725	.783	.863	.696
October.....	38.89	45.31	30.66	.893	.990	.751	.807	.888	.718
1943: January.....	40.62	46.68	32.10	.919	1.017	.768	.819	.905	.726
April.....	42.48	48.67	33.58	.944	1.040	.790	.833	.916	.742
July.....	42.76	48.76	34.01	.963	1.060	.806	.850	.939	.753
October.....	44.86	51.26	35.18	.988	1.086	.824	.863	.950	.768
December.....	44.58	50.50	35.61	.995	1.093	.832	.873	.962	.775
1944: January.....	45.29	51.21	36.03	1.002	1.099	.838	.877	.965	.780
April.....	45.55	51.67	36.16	1.013	1.110	.850	.889	.976	.794
July.....	45.43	51.07	37.05	1.018	1.116	.862	.901	.993	.802
October.....	46.94	53.18	37.97	1.031	1.129	.878	.908	.991	.817
December.....	47.44	53.68	38.39	1.040	1.140	.883	.912	.997	.820
1945: January.....	47.50	53.54	38.66	1.046	1.144	.891	.920	1.005	.827
April.....	47.12	52.90	38.80	1.044	1.138	.899	.925	1.007	.836
July.....	45.45	50.66	38.59	1.033	1.127	.902	.933	1.017	.842
October.....	40.97	44.23	37.76	.985	1.063	.909	.942	1.014	.863
December.....	41.21	44.08	38.52	.994	1.066	.927	.957	1.028	.880
1946: January.....	41.15	43.67	38.75	1.004	1.070	.941	.970	1.037	.895
April.....	42.88	45.71	40.13	1.058	1.131	.988	1.027	1.102	.946
July.....	43.38	46.24	40.46	1.093	1.177	1.009	1.067	1.155	.970
August <sup>2</sup> .....	44.98	48.00	41.89	1.111	1.186	1.036	1.078	1.154	.994
September <sup>2</sup> .....	45.41	48.39	42.34	1.126	1.201	1.049	1.093	1.171	1.008

<sup>1</sup> The method of estimating straight-time average hourly earnings makes no allowance for special rates of pay for work done on major holidays. Estimates for the months of January, July, September, and November, therefore, may not be precisely comparable with those for the other months, in which important holidays are seldom included in the pay periods for which manufacturing establishments report to the Bureau. This characteristic of the data does not appear to invalidate the comparability of the figures for January 1941 with those for the following months.

<sup>2</sup> Preliminary.

# Recent Publications of Labor Interest

December 1946

## Cooperative Movement

*The competition of cooperatives with other forms of business enterprise.* First interim report from the Committee on Small Business, House of Representatives, pursuant to H. Res. 64. Washington, 1946. 43 pp., chart. (House report No. 1888, 79th Cong., 2nd sess.; Union calendar No. 550.) 10 cents, Superintendent of Documents, Washington.

The Committee concluded that tax-exempt farmer cooperatives have a slight tax advantage in the exemption (from Federal income tax) of reserves and of interest paid by them on capital stock, but that consumers' cooperatives and nonexempt farmers' associations have no advantages not available to all types of competitive business; that, since the cooperative serves only as an agent for its members, to whom its income belongs, taxation of its income would "require a drastic change in the basic principles of our revenue laws"; that "there is substantial evidence to show that the cooperative movement operates as a very successful means of combating monopolistic concentrations and, as such, is a very healthy addition to the American economy"; and that "many of the most vocal opponents of cooperatives are themselves members of cooperatives and their firms engage as members in cooperative enterprises."

The principal recommendations of the Committee are that a single Federal agency be authorized to compile statistics of all types of cooperatives; that the Bureau of Internal Revenue amend its regulations to require cooperatives to issue to each patron evidence of his equity; that farmers' purchasing cooperatives be restricted to the handling of farm production supplies; that the retention of refunds be limited to a period of 5 years; and that Congress act to provide a basis for establishment, operation, and federation of nonexempt associations.

*Consumers' cooperation and free enterprise.* By Emory S. Bogardus. (In *Sociology and Social Research*, Los Angeles, May-June 1946, pp. 391-398. 60 cents.)

The thesis of this article is that consumers' cooperatives are genuine expressions of free enterprise because they develop on the basis of individual initiative and independent of government, they decentralize control, they free groups from "oligarchical tendencies," they react vigorously against the "enslaving practices" of monopoly, they encourage fair competition, and their goal is the welfare of all classes.

*Cooperatives.* (In *Building America*, New York, April 1946, pp. 194-223, bibliography, charts, illus. 30 cents.)

The entire April number of this periodical is devoted to cooperatives. Following a statement of cooperative principles, it gives a history of cooperative development in various countries, including the United States, and describes different types of associations.

*Organization and management of cooperative and mutual housing associations.* Washington, U. S. Bureau of Labor Statistics, 1946. 65 pp. (Bull. No. 858—revision of Bull. No. 608.) 20 cents, Superintendent of Documents, Washington.

EDITOR'S NOTE.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

*Memoria y balance general de la Federación Argentina de Cooperativas de Consumo, ejercicio año 1945.* Buenos Aires, 1946. 20 pp.

Financial report of the Argentine Federation of Consumers' Cooperatives for 1945, with summary data for 1932 and 1936-45.

### *Education and Training*

*Counseling techniques in adult education.* By Paul E. Klein and Ruth E. Moffitt. New York, McGraw-Hill Book Co., Inc., 1946. 185 pp., bibliography. \$2. One chapter is on occupational counseling.

*Educating for industry: Policies and procedures of a national apprenticeship system.* By William F. Patterson and Marion H. Hedges. New York, Prentice-Hall, Inc., 1946. 229 pp., bibliography. \$2.50.

Points made in this book include management's stake in apprenticeship as well as that of labor. Methods of establishing an apprenticeship program are outlined.

*Mission and functions of the Retraining and Reemployment Administration.* Washington, U. S. Department of Labor, Retraining and Reemployment Administration, 1946. 4 pp. Free.

*Work experience in secondary education: A study of part-time school and work programs.* By Harold J. Dillon. New York, National Child Labor Committee, 1946. 96 pp. (Publication No. 394.)

Appraisal of programs in which secondary school pupils were released from school part time to take paid employment under a scheme developed and supervised by the schools.

### *Employment and Unemployment*

*Christianity and the economic order, Study No. 3: Employment and unemployment.* New York, Federal Council of the Churches of Christ in America, Department of Research and Education, 1946. 8 pp. (Information Service, September 28, 1946, part 2.)

Considers various aspects of the problem of maintaining a high level of employment.

*Estimated employment and wages of workers covered by State unemployment insurance laws, July-December 1945.* Washington, Federal Security Agency, Social Security Administration, Bureau of Employment Security, 1946. 23 pp., chart; processed. (Supplement to Employment Security Activities, August 1946.)

*Estimates of total employees in manufacturing industries, California, 1943-46.* San Francisco, Department of Industrial Relations, Division of Labor Statistics and Research, 1946. 8 pp.; mimeographed.

*Trends of employment and wages in the covered industries of Pennsylvania, 1940-44.* Harrisburg, Department of Labor and Industry, Bureau of Employment and Unemployment Compensation, 1946. 27 pp., charts; mimeographed. (Statistical information bull. No. 52.)

Data on employment and pay rolls of all employers (nonagricultural) reporting to the Pennsylvania Bureau of Employment and Unemployment Compensation. One of the tables shows average total wages per worker, by year and quarter, 1940-44.

### *Handicapped Workers*

*Efficiency of the impaired worker: A review of information on the experience of employers of handicapped workers.* Washington, Federal Security Agency, Office of Vocational Rehabilitation, 1946. 12 pp., bibliography. Free.

*Health and employment: A study of public assistance clients [of the Department of Welfare, New York City] attending out-patient Department clinics.* By Myra E. Shimberg. New York, National Council on Rehabilitation, 1946. 109 pp., charts, forms.

Survey of employability, looking to a more selective program of diagnosis, rehabilitation, and placement. Preponderance of middle-aged and older individuals, and cardio-vascular conditions and arthritis as the major physical disabilities which led to unemployment, are significant findings.



*Placing the handicapped—a positive, individual, and specific approach.* By Bert Hanman. (In *Industrial Medicine*, Chicago, October 1946, pp. 597-604, bibliography, forms. 75 cents.)

The author was identified with the wartime development of selective placement of workers in industry. In this article he presents an advanced personnel technique for such placement of the handicapped and the results of its operation. He also compares the performance of a handicapped group with that of an able-bodied group.

Substantially the same article was published in *National Safety News*, October 1946 (pp. 103, 106, et seq.).

*Opportunities for the deaf and the hard of hearing through vocational rehabilitation.* Washington, Federal Security Agency, Office of Vocational Rehabilitation, [1946]. 12 pp. Free.

*Readjustment to civilian jobs: Report on neuropsychiatric problems relating to employment in industry.* New York, National Association of Manufacturers, 1945. 22 pp.

Prepared by the NAM Medical Advisory Committee's subcommittee on psychiatry.

*Second annual report, Office of Vocational Rehabilitation Service for the Blind, under the Commission for the Blind and the Prevention of Blindness, [Oregon], for the fiscal year July 1, 1945, to June 30, 1946.* By Clifford A. Stocker, Director. [Portland?], 1946. 26 pp.; mimeographed.

## Housing

*Summary of the 1945 housing year.* Chicago, National Association of Housing Officials, 1946. 16 pp., charts. \$1.

An analysis of urban redevelopment laws and a bibliography of housing literature are included.

*Housing practices—war and prewar: Review of design and construction.* Washington, U. S. National Housing Agency, 1946. 58 pp. (National housing bull. No. 5.) 15 cents, Superintendent of Documents, Washington.

Covers developments in materials and equipment, changes in methods of construction, and related subjects.

*Public housing design: A review of experience in low-rent housing.* Washington, U. S. National Housing Agency, Federal Public Housing Authority, 1946. 294 pp., plans, diagrams, illus. \$1.25, Superintendent of Documents, Washington.

*Production in building and civil engineering: Supplement No. 1, dealing with the analysis of man-hours and machine-hours expended in the advance preparation of housing sites and temporary housing sites [in Great Britain].* London, Ministry of Works, 1946. 8 pp., pasters. 9d. net, H. M. Stationery Office, London.

*Venezuela attacks the housing problem.* By Francis Violich. Washington, Pan American Union, Division of Labor and Social Information, 1946. 13 pp.; mimeographed. (Housing and Planning, No. 3, October 1946.)

## Income

*Changes in income distribution during the great depression.* By Horst Mendershausen. New York, National Bureau of Economic Research, Inc., 1946. 168 pp., charts. (Conference on research in income and wealth, Studies in income and wealth, Vol. VII.) \$2.50.

A study of changes from 1929 to 1933, based largely on the Financial Survey of Urban Housing, a U. S. Civil Works Administration project sponsored by the U. S. Bureau of Foreign and Domestic Commerce. An appendix gives cross-classification tables of 1929 and 1933 incomes for identical samples of families in each of 33 cities, showing changes in family income, by income levels. The author concludes that inequalities within the lower income group and between the lower and the upper income groups increased, while inequalities within the upper income group declined. Various inferences as to the significance of such shifts in the distribution of income are drawn in the preface.

*National income and expenditure of the United Kingdom, 1938-45.* London, H. M. Stationery Office, 1946. 50 pp. (Cmd. 6784.) 9d. net.

### *Industrial Accidents and Accident Prevention*

*Are you planning accidents?* By R. W. Mallick. (In *National Safety News*, Chicago, July 1946, pp. 24, 25, et seq., illus. 60 cents.)

Emphasizes the importance of adequate space provision in planning buildings and lay-out of operations, among other accident-prevention measures which lie in the field of management.

*Ground safety.* By Frederick L. Anderson. (In *Safety Engineering*, New York, September 1946, pp. 14-16, 28-30, illus. 25 cents.)

Description of the Army Air Forces' program for ground safety of civilian and military personnel at various installations. This program has resulted in considerable reduction in accidents and fires.

*A national directory of safety films, 1946-47 edition.* Chicago, National Safety Council, Inc., [1946?]. 48 pp., illus. 25 cents.

Subjects of films listed (with annotations) include industrial, commercial vehicle, public, and home and farm safety, prevention of industrial and other fires, and rehabilitation and training of the handicapped.

*Safe use of scaffolds. Safe operation of power shears. Safe operation of freight elevators.* Washington, U. S. Department of Labor, Division of Labor Standards, 1946. (Industrial safety charts, series R-T.) 5 cents each, Superintendent of Documents, Washington.

*Some data about fire-fighting facilities at metal mines in the United States.* By D. O. Kennedy.

*Safe storage, handling, and use of commercial explosives in metal mines, nonmetallic mines, and quarries.* By D. Harrington and J. H. East, Jr.

*Some safety practices for metal mines, nonmetal mines (other than coal), mills, metallurgical plants, and quarries.*

Washington, U. S. Department of the Interior, Bureau of Mines, 1946. 9, 30, 56 pp.; mimeographed. (Information circulars Nos. 7374, 7380, 7387.) Free.

*American war standard safety code for the industrial use of X-rays, approved April 15, 1946.* New York, American Standards Association, 1946. 54 pp. (Z54.1-1946.) \$1.50.

Calls attention to the many elements of safety which must be considered in the design, installation, maintenance, and operation of X-ray equipment, and lists certain minimum precautions for the safety of workers, including permissible exposure. Also presents procedures for proper control and examination of workers.

### *Industrial Hygiene*

*A disease resulting from the use of pneumatic tools.* By Frederick M. Peters, M.D. (In *Occupational Medicine*, Chicago, July 1946, pp. 55-66, illus. 75 cents.)

Medical report on a group of workers who operated a high-speed pneumatic tool in "burring," while employed in the production of motors for B-29 bombers. Incidence of disease, symptoms, and results of treatment are shown in the report. Against this type of industrial hazard, the author recommends reduction in vibration to a prescribed standard, limitation of length of use of tool, and utilization of mechanical devices for holding it.

*Lobar pneumonia in the shipbuilding industry.* By Charles M. Grossman. (In *Journal of Industrial Hygiene and Toxicology*, Baltimore, September 1946, pp. 233-236, bibliography. Also reprinted.)

Review of all lobar pneumonia cases among employees of the Kaiser Vancouver Shipyards admitted to the Medical Service of Northern Permanente Foundation Hospital in the year ended September 1, 1945. The annual frequency rate was 23.6 percent per 1,000, contrasted with 4.8 percent for adult members of the employees' families. Workers living in the dormitory had more than double the rate of those living with families. Occupationally, frequency was highest among painters and chippers (42.5 and 32.4 percent, respectively).

*Occupational dermatoses.* By J. G. Downing, M.D., and S. J. Messina, M.D. (In *New England Journal of Medicine*, Boston, September 19, 1946, pp. 416-423; September 26, pp. 472-480, bibliographies. 25 cents each.)

Summarizes recent medical experience in this field.

*The safe use of solvents for synthetic rubbers.* By Leonard Greenburg, M.D., and Samuel Moskowitz. (In Monthly Review of Division of Industrial Hygiene & Safety Standards, New York State Department of Labor, New York, May 15 and June 1, 1946. 8 pp., bibliography, diagrams, illus.)

*The toxicity and potential dangers of methyl bromide with special reference to its use in the chemical industry, in fire extinguishers, and in fumigation.* By W. F. Von Oettingen. Washington, Federal Security Agency, Public Health Service, 1946. 41 pp., bibliography, diagrams. (National Institute of Health Bull. No. 185.) 15 cents, Superintendent of Documents, Washington. Industrial hazards are pointed out and their prevention discussed.

### Industrial Relations

*The administration, under collective bargaining, of welfare plans based on employer contributions.* By David J. Farber. Washington, U. S. National Wage Stabilization Board, Case Analysis and Program Appraisal Division, Research and Statistics Branch, 1946. 44 pp.; mimeographed. Free.

*Arbitration of labor disputes.* By Clarence M. Updegraff and Whitley P. McCoy. Chicago, Commerce Clearing House, Inc., 1946. 291 pp. \$3.75.

Includes specimen decisions and awards, specimen contract clauses covering arbitration, and citations to State arbitration statutes. Footnotes give references to court decisions covering topics discussed, and there is a detailed subject index.

*Collective bargaining and the strike limitation issue, 1933-46: A review of national labor relations policy and a brief analysis of proposed labor relations legislation.* By Gustav Peck. Washington, U. S. Library of Congress, Legislative Reference Service, 1946. 39 pp., paster; mimeographed. (Public affairs bull. No. 39.) Available (free) only to libraries.

*Labor adjustment machinery.* By Herbert R. Northrup. New York and Washington, American Enterprise Association, 1946. 51 pp. (National economic problems, No. 417.) 50 cents.

In this brief history and analysis of existing and proposed Federal, State, and municipal machinery for the adjustment of labor-management disputes, the author deals primarily with mediation, conciliation, and arbitration procedures. He reviews the organization and operations of railway adjustment machinery, the United States Conciliation Service, and special agencies established during World War I and World War II, and summarizes labor legislation proposed during 1945.

*Work stoppages caused by labor-management disputes in 1945.* Washington, U. S. Bureau of Labor Statistics, 1946. 41 pp., charts. (Bull. No. 878; reprinted from Monthly Labor Review, May 1946, with additional data.) 10 cents, Superintendent of Documents, Washington.

*TVA labor relations: A laboratory in democratic human relations.* By Max M. Kampelman. (In Minnesota Law Review, Minneapolis, April 1946, pp. 332-371, bibliography. \$1.)

Describes the purposes, formation, and activities of the Tennessee Valley Authority and the gradual formulation of its labor policy. Subjects covered include recruitment of labor, relations with unions, methods of fixing wages, adjustment of grievances, training of workers, apprenticeship, retirement system, and accident-prevention work.

*Les commissions paritaires d'industries en Belgique.* By Albert Delpérée. (In Revue du Travail, Ministère du Travail et de la Prévoyance Sociale de Belgique, Brussels, May-June 1946, pp. 408-425.)

History of development of joint industrial councils in Belgium, their membership, powers, and work, 1918-40; their disappearance with the dissolution of free trade unions during the German occupation; and their revival, after the country's liberation, under the decree-laws of April 14 and June 9, 1945, and the decree of October 15, 1945.

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### *International Labor Conditions*

*International Labor Conference, 29th session, Montreal, 1946.* Montreal, International Labor Office, 1946. Distributed in United States by Washington Branch of I. L. O.

Report I, *Director's report.* 113 pp. 60 cents.

Report II, *Constitutional questions: Part 1, Reports of the Conference delegation on constitutional questions.* 197 pp. \$1. Part 2, *Draft agreement between the United Nations and the International Labor Organization.* 12 pp. 10 cents.

Report III, *Protection of children and young workers.* 257 pp. \$1.25.

Report IV, *Proposed international labor obligations in respect of non-self-governing territories: Part 1, Preliminary report.* 190 pp. \$1. Part 2, *Further report.* 53 pp. 25 cents.

Report V (with supplement and appendix), *Reports on the application of Conventions (article 22 of the constitution [of the International Labor Organization]).* 121, 44, 10 pp. \$2.

The reports listed were prepared for submission to the Conference and deal with the five items on its agenda.

### *Labor Legislation (General)*

*Annual digest of State and Federal labor legislation enacted August 1, 1945, to August 1, 1946.* Washington, U. S. Department of Labor, Division of Labor Standards, 1946. 32 pp. (Bull. No. 84.) 15 cents, Superintendent of Documents, Washington.

*The President, Congress, and legislation.* By Lawrence H. Chamberlain. New York, Columbia University Press, 1946. 478 pp., bibliography. (Studies in history, economics, and public law, No. 523.) \$5.

One chapter deals with labor legislation from 1900 to 1938.

*Labor laws of the State of Oklahoma, 1946 edition.* Oklahoma City, Department of Labor, 1946. 137 pp.

*Current trends in labor law in Virginia.* By John C. Parker, Jr. (In *Virginia Law Review*, Charlottesville, August 1946, pp. 1050-1063. \$1.)

*Labor legislation in Canada in 1945.* Ottawa, Department of Labor, 1946. 121 pp. 25 cents, Edmond Cloutier, Ottawa.

Labor legislation enacted in 1946 by the Dominion Parliament, and recent regulations under Dominion and Provincial legislation, were summarized in the September 1946 *Labor Gazette* of the Department of Labor.

### *Labor Organizations and Their Activities*

*Report of the Executive Council of the American Federation of Labor to the sixty-fifth convention, Chicago, Ill., October 7, 1946.* Washington, 1946. 220 pp.

Presents statistics on AFL membership, finances, and fraternal benefits, and discusses national and international developments of interest and concern to labor.

*Labor unions and municipal employee law.* By Charles S. Rhyne. Washington, National Institute of Municipal Law Officers, 1946. 583 pp. \$10.

Compilation of court decisions and orders, opinions of city attorneys and State attorneys-general, and other material on relations between municipalities and labor unions with respect to union membership of municipal employees.

*Les vues économiques actuelles du syndicalisme français.* By Robert Bothereau. (In *La Revue Économique et Sociale*, Paris, August-September 1946, pp. 5-14.)

Following a short review of the French General Confederation of Labor's programs from 1914 to the outbreak of World War II, the article gives a brief summary of the present-day demands of the Confederation for works committees (*comités d'entreprise*) in the various enterprises of the national economy, for a Superior Economic Council to advise the Government, etc.

*The law of trade unions.* By H. Samuels. London, Stevens & Sons, Ltd., 1946. 96 pp. 2d ed. 6s.

Short textbook on British trade-union law as it stands after the repeal of the 1927 Trade Disputes and Trade Unions Act. Deals with union contracts, criminal conspiracy and intimidation, legality of strikes and picketing, property and liabilities of unions, etc.

### Medical Care

*Medical care insurance: A social insurance program for personal health services.* Report from Bureau of Research and Statistics, Social Security Board, to Committee on Education and Labor, U. S. Senate. Washington, 1946. 185 pp. (Senate committee print No. 5, 79th Cong., 2d sess.) Limited free distribution by Bureau of Research and Statistics, Social Security Board, Federal Security Agency, Washington.

Comprehensive report covering the objectives, scope, and estimated cost of a coordinated national social-insurance system of medical care, and analyzing such phases as coverage, financing, administration, operation, benefits, and professional services. A preview is given of the system in operation, with respect to various interested groups. Alternate plans are suggested and practical experience is summarized.

*National health program.* Hearings, April-July 1946, before Committee on Education and Labor, U. S. Senate, 79th Congress, 2d session, on S. 1606, a bill to provide for a national health program. Washington, U. S. Government Printing Office, 1946. 5 parts, 3086 pp. \$1 each, except part 3, \$1.25.

*Free medical care.* Compiled by Clarence A. Peters. New York, H. W. Wilson Co., 1946. 378 pp. (Reference shelf, Vol. 19, No. 3.) \$1.25.

Debate handbook on adequate medical care for the Nation, consisting of quoted material, briefs, and an extensive bibliography.

### Occupations

*A bibliography of occupational and educational materials used in the Educational Services counseling program.* Washington, U. S. Bureau of Naval Personnel, Educational Services Section, [1946?]. 27 pp.; processed.

*Occupational outlook information.* Washington, U. S. Department of Labor, Retraining and Reemployment Administration, 1946. 6 pp. Free.

List of occupational outlook materials issued by the Federal Government.

*Get the job!* By Willard Abraham. Chicago, Science Research Associates, 1946. 198 pp., chart.

Suggestions on how to choose, get, and advance on a job, and related information.

*How to get the job you fit.* By Ernst F. Curtz. New York, Franklin Watts, Inc., 1946. 64 pp., diagrams. \$1.

*Opportunities in radio.* By Jo Ranson and Richard Pack. New York, Vocational Guidance Manuals, Inc., 1946. 104 pp., bibliography.

Occupational fields covered by other volumes in this series include acting, architecture, free-lance writing, journalism, and public relations.

### Old-Age Adjustment and Retirement

*Creative old age.* By Clare de Gruchy. San Francisco, Old Age Counselling Center, 1946. 143 pp., illus. \$2.75.

Presentation of case histories and projects illustrating the application and effectiveness of the principles and procedures of the Old Age Counselling Center, of which the author is the director.

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*188 retirement plans, 1944-46.* New York, Bankers Trust Co., 1946. 59 pp. Tabular summary of provisions of individual company pension plans as to eligibility, employee contributions, benefits, methods of funding, etc.

*Railroad Retirement Board operations, 1945-46.* (In *Monthly Review*, U. S. Railroad Retirement Board, Chicago, August 1946, pp. 130-156, map, charts.)

Includes data, for 1945-46 and certain earlier periods, on operation of the respective systems of unemployment insurance, employment service, and retirement, and on wage and service records, and selected current statistics of the Board's operations in June 1946.

*Trust funds of the Federal Reserve and Tennessee Valley Authority retirement systems.* (In *Social Security Bulletin*, Federal Security Agency, Social Security Board, Washington, July 1946, pp. 49-54. 15 cents, Superintendent of Documents, Washington.)

Gives information on income and types of investments for 1935, 1940, and 1945. Both employers and employees contribute to the funds.

### Population

*Population—internal migration, 1935 to 1940: Age of migrants. Color and sex of migrants. Economic characteristics of migrants. Social characteristics of migrants.* Washington, U. S. Department of Commerce, Bureau of the Census, 1943 (Color and sex of migrants) and 1946. 382, 490, 223, 270 pp. (Sixteenth census of the United States, 1940.) \$1.25, \$2.25, 60 cents, \$1, respectively, Superintendent of Documents, Washington.

*Economic demography of eastern and southern Europe.* By Wilbert E. Moore. Geneva, League of Nations, 1945. 299 pp., bibliography, maps, charts. \$3, Columbia University Press, New York.

Prepared for League of Nations by Office of Population Research, Princeton University, in execution of a program drawn up before the war by a committee appointed by the Council of the League to study, in their economic, financial, and social settings, problems arising from rapidly increasing populations. Abundant prewar statistical data are presented and discussed.

*European population transfers, 1939-45.* By Joseph B. Schechtman. New York, Oxford University Press, 1946. 532 pp., bibliography, map. \$5.

Factual account of the organized removal of minority groups from their countries of residence during World War II, and their subsequent resettlement. The author suggests population transfers as a solution of the problems of minorities for which no other satisfactory solution can be found.

*Viellissement de la population, retraites, et immigration.* By Paul Vincent. (In *Population*, revue trimestrielle de l'Institut National d'Études Démographiques, Paris, April-June 1946, pp. 213-244., charts.)

Survey of the present and possible future age structure of the French population and its relation to retirement in France and certain other countries. Includes an examination of the advantages of immigration as a compensation for decline of the population in certain age groups and a help in reconstructing the war-damaged French economy and regaining prewar living standards.

*The problem of Italy—an economic survey.* By Ivor Thomas. London, George Routledge & Sons, Ltd., 1946. 96 pp. 5s.

Brief summary of Italy's overpopulation in relation to her resources, with suggestions for building a prosperous Italy by relieving the pressure of population and developing resources and industry. Contains 30 statistical tables, illustrating and forecasting the demographic problem and showing the occupational distribution of the population.

*Folkmängden inom administrativa områden, [Sweden], den 31 december 1945.* Stockholm, Statistiska Centralbyrån, 1946. 46 pp.

One of the statistical tables in this report on the population of Sweden at the end of December 1945 shows migration to, from, and within the country. A translation of the table of contents and a brief résumé in French are provided.



### Price Control

*The general maximum price regulation.* Washington, U. S. Bureau of Labor Statistics, 1946. 57 pp., bibliography. (Bull. No. 879.) 15 cents, Superintendent of Documents, Washington.

*Reflections on price control.* By John Kenneth Galbraith. (In *Quarterly Journal of Economics*, Cambridge, Mass., August 1946, pp. 475-489. \$1.25.)

Discusses the causes of the greater degree of efficiency of emergency price controls than economists generally had expected.

### Recreation

*Industrial recreation facilities.* By Earl L. Ferris and Floyd R. Eastwood. Lafayette, Ind., Purdue University, 1945. 48 pp., bibliography, illus.

Summary of data furnished by 61 companies employing a total of 248,055 workers.

*Recreation for industrial workers.* New York, National Recreation Association, 1945. 48 pp., bibliography, charts. Rev. ed. 50 cents.

Simple guide for plant and related activities.

### Veterans' Affairs

*Twelfth annual national conference of veterans' employment representatives, St. Louis, Mo., May 11-15, 1946.* Washington, U. S. Department of Labor, Employment Service, Veterans' Employment Service, 1946. 310 pp.; processed. Free.

*Veterans' rights under union agreements.* Washington, U. S. Bureau of Labor Statistics, October 1946. 12 pp.; mimeographed. Free.

*War veterans in civil life.* By Kendrick Lee. Washington, Editorial Research Reports, 1205-19th Street NW., 1946. 14 pp. (Vol. II, 1946, No. 3.) \$1.

Deals with special problems that the war veterans have in readjusting to civilian life. Attention is directed to lack of housing and educational facilities.

*Opportunity unlimited: A guide for veterans interested in the construction industry.* By Van Rensselaer Sill. Issued by Committee on Opportunities for Veterans in the Construction Industry. Washington, E. Lawrence Chandler (secretary to committee), 1026-17th Street NW., 1946. 55 pp. 10 cents.

*On-the-job training for veterans in retail service trades.* Prepared by Chicago Retail Merchants Association. Washington, American Retail Federation, 1946. 79 pp.

### Wages and Hours of Labor

*Wartime wages, income, and wage regulation in agriculture.* Washington, U. S. Bureau of Labor Statistics, 1946. 18 pp. (Bull. No. 883; reprinted from *Monthly Labor Review*, July and August 1946.) 10 cents, Superintendent of Documents, Washington.

*Factors affecting earnings in chemistry and chemical engineering.* Washington, U. S. Bureau of Labor Statistics, 1946. 22 pp., charts. (Bull. No. 881; reprinted from *Monthly Labor Review*, June 1946, with additional data.) 10 cents, Superintendent of Documents, Washington.

*Wage and hour manual—laws, rulings, interpretations in wage-hour regulation: A complete handbook and guide to Federal regulation of wages, hours, and child labor, 1946 edition (covering period between November 1, 1945, and July 1, 1946).* Washington, Bureau of National Affairs, 1946. 408 pp. \$4. Supplement to 1944-45 edition, cumulated to November 1, 1945 (\$10).

*The wage-cost-price dilemma.* (In *Conference Board Business Record*, National Industrial Conference Board, Inc., New York, September 1946, pp. 343-366.)

*Wage diversity and its theoretical implications.* By Richard A. Lester. (*In Review of Economic Statistics*, Cambridge, Mass., August 1946, pp. 152-159.)

The author states that, contrary to conventional wage theory, one of the most significant facts about wage rates is their variation for the same job in the same labor market. The evidence presented is largely from Bureau of Labor Statistics occupational wage-rate data. In his analysis of the theoretical implications, the author suggests various causes of wage diversity and states that "new and broader approaches are needed to develop adequate explanations of wage rates actually being paid."

*Time rates of wages and hours of labour, August 1, 1946.* London, Ministry of Labour and National Service, 1946. 133 pp. 2s. net, H. M. Stationery Office, London.

Minimum time rates in Great Britain, fixed by collective agreements, joint industrial councils, or statutory orders under various wage acts are set forth in tabular form for occupations and industries within principal industry groups in manufacturing, agriculture, mining and quarrying, building, transport, public utilities, distributive trades, national and local governments, and miscellaneous industries and services. Industries covered by the Wages Councils Act are tabulated separately. Hours of labor in a full week, generally exclusive of mealtimes, are given. Other provisions listed include the time-rate basis for piece work, guaranteed weekly wages, arrangements for shift work, and other special features.

*Twenty-seventh report of the Department of Labor, Province of Ontario, 1946.* Toronto, 1946. 63 pp.

The report of the Minimum Wage Branch shows the average number of hours worked (normally) per week by male and female employees, and hourly or weekly wage rates for women and for girls, by industry.

### *Women in Industry*

*Women in factories, October 1939-June 1946: Estimated number of women production workers employed in manufacturing industries.* Washington, U. S. Bureau of Labor Statistics, 1946. 16 pp.; mimeographed. Free.

*Women in industry, their health and efficiency.* By Anna M. Baetjer. Philadelphia, W. B. Saunders Co., 1946. 344 pp., bibliographies, charts. \$4.

Presents basic information on proper employment and work environment for women, with relation to their physiological processes. Originating in the war-production needs of Army plants, and prepared in the Army Industrial Hygiene Laboratory, the volume reviews and evaluates important published and unpublished studies bearing on women in industry and prescribes correct industrial practice. Section I is devoted to an analysis of the physical ability of women to work, suitable types and arrangements of work, and personnel and plant policies in employment of women. Succeeding sections deal, respectively, with sickness absenteeism, accidental injuries, occupational diseases, gynecological and obstetrical problems associated with employment, and mortality and fertility in relation to occupation.

*Women workers in ten war production areas and their postwar employment plans.* Washington, U. S. Department of Labor, Women's Bureau, 1946. 56 pp. (Bull. No. 209.) 15 cents, Superintendent of Documents, Washington.

*Analysis of State minimum-wage orders (effective dates May 6, 1946-October 23, 1946).* Washington, U. S. Department of Labor, Women's Bureau, 1946. 11 pp.; mimeographed. (Supplement No. 3 to Bull. No. 191.) Free.

*Cost of living for women workers at adequate maintenance and protection of health, New York State, 1945.* New York, State Department of Labor, Division of Industrial Relations, Women in Industry, and Minimum Wage, 1946. 30 pp., map, chart; processed.

*Women and work.* By Gertrude Williams. London, Nicholson & Watson, 1945. 128 pp., bibliography, charts, illus. 5s. net.

This popular presentation gives a historical account of the development of women's employment outside the home in Great Britain, and discusses economic and social factors affecting women's work and also differences between the earnings and union membership of women and those of men.

## General Reports

*The labor situation.* (In *Fortune*, New York, November 1946, pp. 121-126, et seq. \$1.)

The article listed is one in a symposium on "Labor in U. S. industry" comprising this issue of *Fortune*. Other articles include: Anatomy of the labor force; Labor drives South (dealing with AFL and CIO organizational drives in the South); United Steelworkers of America; The Garment Workers (International Ladies' Garment Workers' Union).

*Annual report of the Department of Labor and Industrial Relations, Territory of Hawaii, July 1, 1945, to June 30, 1946.* Honolulu, 1946. 51 pp., charts.

Contains the annual reports of the different branches of the Department, including the Bureaus of Workmen's Compensation, Unemployment Compensation, Labor Law Enforcement (Wage and Hour and Child Labor Divisions), and Research and Statistics, and the Territorial Apprenticeship Council.

[*Memorandum on cost of living, food distribution and supply, wages, housing, labor organizations, and strikes in seven Latin American countries.*] By Ernesto Galarza, Washington, Pan American Union, Division of Labor and Social Information, 1946. 51 pp.; mimeographed.

*Bulletin de l'Institut de Recherches Économiques et Sociales, XII<sup>e</sup> année, No. 1.* Louvain, Université Catholique de Louvain, Institut de Recherches Économiques et Sociales, January 1946. 126 pp., charts. Yearly subscription, 200 francs.

With this number the *Bulletin de l'Institut de Recherches Économiques et Sociales* succeeds the *Bulletin de l'Institut de Recherches Économiques*, publication of which was suspended on the German invasion of Belgium. The issue contains three studies: D'une politique du volume de l'emploi en Belgique; Emploi et revenus en économie ouverte: théorie et application à l'évolution belge et britannique de 1919 à 1939; Introduction aux chroniques de la conjoncture économique de la Belgique (which will again become a regular feature). More than 30 pages of the second study are on wage changes.

*La main-d'œuvre belge au service des armées alliées—aperçu général des conditions de travail.* By Aug. De Block. (In *Revue du Travail*, Ministère du Travail et de la Prévoyance Sociale de Belgique, Brussels, March-April 1946, pp. 255-272.)

Survey of the policies followed in the use of Belgian workers by the Allied armies in Belgium, covering, particularly, problems of administration, wage scales and wage payments, and application of laws on hours of work and social security.

*Esquisse de l'économie française sous l'occupation allemande.* By Louis Baudin. Paris, Librairie de Médecis, 1945. 222 pp., bibliography. 120 fr.

Sketch of economic conditions in France during the German occupation, written mainly at the request of foreign readers. Covers the dissolution of the labor and employer organizations, the creation (August 16, 1940) and development of the Vichy Government Organization Committees, the labor charter (law of October 4, 1941), employment, rationing, the black market, price control, prices, and wages.

*Wartime labor conditions and reconstruction planning in India.* Montreal, International Labor Office, 1946. 113 pp. (Studies and reports, new series, No. 2.) 50 cents. Distributed in United States by Washington Branch of I. L. O.

*The Soviet Government organizes for reconstruction.* By John N. Hazard. (In *Journal of Politics*, Gainesville, Fla., August 1946, pp. 248-277.)

Among the topics discussed are demobilization (including reemployment rights and other benefits for veterans), amnesty to violators of the wartime strict disciplinary labor decree, restoration of vacation rights, the program of special benefits to encourage increase in size of families, and rewards to those who serve the State well.



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variations in Prospective Labor Supply

War Labor Stoppages

Productivity Changes Since 1939

Physically Impaired Worker in Industry

Job Requirements—Southern Pine Lumber Production



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